

Strengthening nursing and midwifery

A Global Study



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Linda O'Brien-Pallas
Miriam Hirschfeld
Andrea Baumann
Judith Shamian
Irmajean Bajnok
Orvill Adams
Evelyn Isaacs
Sandra Land
Jane Salvage
Sally Ann Bisch
Theresa Miller
Anwar Islam
Marcia Luba

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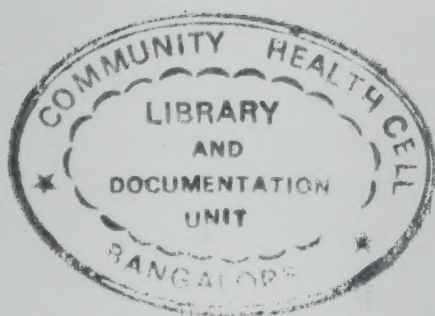
Chief Scientist for Nursing
World Health Organization
1211 Geneva 27
Switzerland

Fax: +41 22 791 0746
E-mail: hirschfeldm@who.ch
mbelebongh@who.ch

and:

Co-Director
Nursing Effectiveness, Utilization and Outcomes Research Unit
Faculty of Nursing
University of Toronto
50 St. George Street
Toronto, Ontario M5S 3H4
Canada

Fax: +1 416 978 8222
E-mail: l.obrien.pallas@utoronto.ca



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Strengthening nursing and midwifery – a global study

A Study to Examine the Strengthening of Nursing and Midwifery Services
An Examination of the Extent of Implementation of Resolution WHA45.5

Funded by the International Development Research Centre
Ottawa, Canada

Co-Principal Investigators

Linda O'Brien-Pallas, R.N., Ph.D.
Associate Professor/Career Scientist
Co-Director, Nursing Effectiveness, Utilization
and Outcomes Research Unit
Faculty of Nursing, University of Toronto
Toronto, Canada

Miriam Hirschfeld, R.N., D.N.Sc.
Chief Scientist for Nursing
Division of Analysis, Research and Assessment
World Health Organization
Geneva, Switzerland

Co-Investigators

Andrea Baumann, R.N., Ph.D.
Professor and Associate Dean, Health Sciences
Co-Director, Nursing Effectiveness, Utilization
and Outcomes Research Unit
McMaster University
Hamilton, Canada

Judith Shamian, R.N., Ph.D.
Vice-President, Nursing
Head, WHO Collaborating Centre
Mount Sinai Hospital
Toronto, Canada

Irmajean Bajnok, R.N., Ph.D.
Executive Director
DWHP Program
Aga Khan University
Karachi, Pakistan

Orvill Adams, M.Sc.
Scientist, Division of Development of Human
Resources for Health
World Health Organization
Geneva, Switzerland

Evelyn Isaacs, R.N., M.Sc.
Former Regional Adviser for Nursing/Midwifery
WHO Regional Office for Africa
Brazzaville, Congo

Sandra Land, R.N., Ph.D.
Regional Nursing Adviser
WHO Regional Office for the Americas
Washington, DC, USA

Jane Salvage, R.N., M.Sc.
Former Regional Adviser for Nursing and Midwifery
WHO Regional Office for Europe
Copenhagen, Denmark

Sally Ann Bisch, R.N., D.N.Sc.
Regional Nursing Adviser
WHO Regional Office for South-East Asia
New Delhi, India

Theresa Miller, R.N., M.P.H.
Former Regional Adviser in Nursing
WHO Regional Office for the Western Pacific
Manila, Philippines

Anwar Islam, Ph.D.
Scientist
International Development Research Centre
Ottawa, Canada

Marcia Luba, B.A., M.Ed. (Candidate)
Research Officer
Nursing Effectiveness, Utilization
and Outcomes Research Unit,
Faculty of Nursing, University of Toronto
Toronto, Canada

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The first of these is the fact that the number of cases of disease in the United States is increasing. This is true for all diseases, but particularly for those which are caused by bacteria. The number of cases of bacterial disease has increased in the last few years, and this is due to a number of factors. One of the most important is the fact that the number of people who are exposed to bacteria is increasing. This is due to a number of factors, including the fact that the number of people who are living in crowded conditions is increasing, and the fact that the number of people who are traveling is increasing. Another factor is the fact that the number of people who are using antibiotics is increasing. This is due to the fact that antibiotics are being used more and more often, and this is leading to the development of resistance to these drugs. A third factor is the fact that the number of people who are using immunizations is decreasing. This is due to the fact that immunizations are being used less and less often, and this is leading to the development of disease. The second of these factors is the fact that the number of people who are using antibiotics is increasing. This is due to the fact that antibiotics are being used more and more often, and this is leading to the development of resistance to these drugs. A third factor is the fact that the number of people who are using immunizations is decreasing. This is due to the fact that immunizations are being used less and less often, and this is leading to the development of disease.

Executive summary

In almost all countries of the world, nursing and midwifery services are the backbone of the health care system; the nurse or midwife is often the primary caregiver. Yet while nurses and midwives have played a significant role in the delivery of services, they have not enjoyed the status or economic support to realize their full potential. In recent years economic, political, and social developments and changing health care needs have underlined the importance of strengthening nursing and midwifery. The *World Development Report 1993* (World Bank, 1993) noted that the most cost-effective way to provide essential care is through a combination of public health strategies and a package of essential primary care services, most of which can be provided by nurses and midwives.

It is within this context that the resolution to strengthen nursing and midwifery was adopted by the World Health Assembly in May 1992 (WHA45.5). The eight key objectives for Member States proposed by the resolution are related to the assessment of nursing/midwifery personnel need, utilization, and roles and functions; strengthening of managerial and leadership capabilities; enactment of legislation; strengthening education; promoting and supporting health services research; ensuring appropriate working conditions; ensuring the allocation of adequate resources (financial, human, and logistic) for nursing and midwifery activities; and ensuring that the contributions of nursing and midwifery are reflected in health policy.

The Health Assembly also recommended the establishment of a Global Advisory Group on Nursing and Midwifery (GAG) to advise the Director-General of WHO on the implementation of the resolution and monitor the extent of progress in implementation. The study reported here was designed to assist GAG in carrying out its mandate to monitor progress in implementation of the resolution.

A 37-item survey questionnaire was developed for the study, in eight sections structured around the eight elements of the resolution. One hundred and fifty Member States responded for a 79% response rate. The responses to each of the eight sections are described here in detail. The percentages of Member States responding "yes" to questions are presented by the six WHO regions and by four levels of economic development, according to the classification of the World Bank (1993). Where possible, individual Member States are identified.

More than half of Member States reported that they had assessed future needs for nursing services while 40% had assessed needs for midwifery services; 54% and 35% had assessed the current deployment and utilization of nurses and midwives, respectively; and 46% had studied nursing and midwifery roles in relation to changing health care needs and the roles and functions of other providers. Countries which had completed assessments, reported increasing demands for services, shortages of personnel, and often inadequate or inappropriate deployment of personnel. In response, a third (38%) had developed a written national action plan for nursing, and 25% a plan for midwifery. A third (33%) reported increases in research on the contributions of nurses and midwives to health care delivery.

Countries reported a variety of concrete measures to strengthen nursing and midwifery. Changes in education were the most important developments since the

passage of resolution WHA45.5: 66% of Member States had reviewed/improved the quality of basic nursing/midwifery education since 1992 and 58% had reviewed/improved continuing education; 48% had strengthened post-graduate education; and 61% and 48% had strengthened the primary health care content in education for nurses and midwives, respectively. A number of countries had made completion of secondary education a requirement for admission to nursing school, and 47% indicated that access to university education for nurses and midwives had increased. Only 25%, however, reported increases in the resources for fellowships for postbasic education. While nurses and midwives constitute approximately 50% of the health care workforce, only 4% of WHO fellowships have been awarded to nurses and midwives.

Forty-two per cent of the countries reported improved career opportunities, and 44% reported changes in the number of budgeted posts for nurses and midwives. However, poor salaries and limited career opportunities were reported alongside shortages of nursing and midwifery personnel. While 53% of Member States reported increases in salaries and benefits since 1992, several countries reported that because of financial crises nurses were not paid at all for months on end.

Various efforts to include nurses and midwives in policy development were reported: 54% of Member States said changes had occurred in the contributions of senior nurses and midwives to policy development. However, only 23% had a nursing unit in the ministry of health and less than half (48%) had a chief nursing officer at the ministry level. Some other countries had a focal point for nursing and midwifery.

While the study data show progress at country level, there is a need for far more action to strengthen nursing and midwifery if these cost-effective resources are to play a decisive role in improving the coverage and quality of services to people and especially populations in greatest need. This study, in many respects, is a first attempt to describe the state of nursing and midwifery services throughout the world. This report also provides a substantive description and baseline from which further in-depth country analyses can be planned. At present there is no reference point from which to evaluate the findings of this study, but it is hoped that in future years the survey can be repeated to provide an ongoing summary of progress to date. As Member States prepare targets related to health for all outcomes for WHO's Ninth General Programme of Work, gaps in nursing and midwifery services need to be addressed to assist in achieving these outcomes.

Table of contents

Acknowledgments	v
Executive summary	vii
List of tables	xi
Background	1
Methods	3
Questionnaire	3
Data Analysis	4
Results	5
Response Patterns	5
Assessment of Nursing and Midwifery Resources	6
Reported Methods of Assessment	6
Assessment of needs for and utilization of nursing services	6
Assessment of needs for and utilization of midwifery services	7
Assessment of roles and functions for nursing and midwifery personnel	7
Assessment of Nursing and Midwifery Resources – Qualitative Findings	8
Education	8
Shortages	8
Regulations	10
Concerns about roles and functions	10
Strengthening Management and Leadership for Nursing and Midwifery	11
Enacting Legislation	14
Strengthening Education	15
Financial Resources	17
Fellowships	19
Access to University Education	21
Promoting Research	22
Improving Working Conditions	25
Ensuring Adequate Resources	28
Ensuring the Contributions of Nurses and Midwives to Health Policy	30
Mechanisms for Policy Impact	31
Policy Changes	32
Action Plans	32
Nursing and Midwifery Support in Ministries of Health	32
Extent of Distribution of Resolution WHA45.5	34
Relationships Among Elements of Resolution WHA45.5	34
Discussion and recommendations	37
Summary	38
References	41

Appendix A – The Resolution 43

Appendix B – The Questionnaire 45

Appendix C – Member States receiving questionnaire 53

Appendix D – Qualitative codes and themes with examples 57

Appendix E – Associate and Non-Member States’ Responses 65

List of tables

1	Member States' response patterns by region	5
2	Percentage of Member States reporting completed or planned assessments of nursing and midwifery needs, utilization, and roles, by region	7
3	Percentage of Member States reporting completed or planned assessments of nursing and midwifery needs, utilization, and roles, by level of economic development	8
4	Percentage of Member States reporting completed or planned increases in nursing/midwifery positions and training opportunities, by region	11
5	Percentage of Member States reporting completed or planned increases in nursing/midwifery positions and training opportunities, by level of economic development	12
6	Member States, by region, commenting on the use of in-services, seminars, and efforts by nurses and midwives to advance their knowledge and skills on their own	13
7	Percentage of Member States reporting enacted or planned legislation/regulations aimed at ensuring the quality of nursing and midwifery services and education, by region	14
8	Percentage of Member States reporting enacted or planned legislation/regulations aimed at ensuring the quality of nursing and midwifery services and education, by level of economic development	14
9	Percentage of Member States reporting strengthening of PHC content in curricula and review/upgrade of the quality of nursing/midwifery education, by region	15
10	Percentage of Member States reporting strengthening of PHC content in curricula and review/upgrade of the quality of nursing/midwifery education, by level of economic development	16
11	Percentage of Member States reporting changes in the financial resources available to support education for nursing and midwifery, by region	17
12	Percentage of Member States reporting changes in the financial resources available to support education for nursing and midwifery, by level of economic development	18
13	Percentage of Member States reporting changes in the financial resources supporting fellowships for nurses and midwives, by region	19
14	Percentage of Member States reporting changes in the financial resources supporting fellowships for nurses and midwives, by level of economic development	20
15	Percentage of Member States reporting increased access to university education since 1992, by region and level of economic development	21
16	Percentage of Member States reporting increases and planned increases in health services research initiatives on the contribution of nursing and midwifery to health care delivery, by region	22
17	Percentage of Member States reporting increases and planned increases in health services research initiatives on the contribution of nursing and midwifery to health care delivery, by level of economic development	23
18	Percentage of Member States reporting increases in salaries or benefits and improvement in career opportunities, by region	25
19	Percentage of Member States reporting increases in salaries or benefits and improvement in career opportunities, by level of economic development	25
20	Percentage of Member States reporting changes in the number of budgeted posts for nurses and midwives, by region	29

21	Percentage of Member States reporting changes in the number of budgeted posts for nurses and midwives, by level of economic development	29
22	Percentage of Member States reporting changes in the contribution of nurses/midwives to policy development, policy changes, and a written national action plan, by region	30
23	Percentage of Member States reporting changes in the contribution of nurses/midwives to policy development, policy changes, and a written national action plan, by level of economic development	31
24	Number and type of nursing and midwifery positions at the Ministry of Health, by region and level of economic development	33
25	Percentage of Member States reporting distribution of resolution WHA45.5 to relevant officials/nurses/midwives, by region	34
26	Percentage of Member States reporting distribution of resolution WHA45.5 to relevant officials/nurses/midwives, by level of economic development	34
27	Correlations between completion of assessments (need, utilization, and role assessments) and completed and planned activities to strengthen nursing and midwifery	35

Background

In almost all countries of the world, nursing and midwifery services are the backbone of the health care system representing over 50% of the health profession. Yet while nurses and midwives have played a significant role in the delivery of services, their full potential has not been realized. The need to strengthen the roles of nurses and midwives was identified as early as in 1948 by the World Health Organization (WHO). In that year, the first World Health Assembly (WHA) passed a resolution (WHA1.46) that pointed to the need to increase the number of nurses and establish roles that would result in more appropriate use of nursing service for care delivery in many countries. Since that time several additional resolutions aimed at strengthening the role of nursing and midwifery have been passed with the unanimous support of Member States.

In recent years economic, political, and social developments and changing health care needs have underlined the importance of strengthening nursing and midwifery. There are growing demands for accessible and affordable quality health care throughout the world. To illustrate just some areas where nursing and midwifery services are needed, we quote the following statistics. A recent WHO report (1995) noted that each year, worldwide, there are 4.1 million deaths from respiratory infections among children and more than three million deaths from diarrhoeal disease among children under five. Cholera now affects five WHO regions. In 1993, 78 countries reported almost 400,000 cases of cholera. Mortality due to malaria is estimated at 1.5 to 3 million deaths per year.

While diseases preventable by vaccination are in general declining throughout the world, there are still an estimated 2.9 million deaths each year from diseases preventable by vaccination. There are still some 45 million cases of measles each year, with more than one million children dying of the disease annually.

There are more than eight million new cases of tuberculosis each year, with almost three million deaths. More than 16 million adults and one million children have contracted HIV infection since the start of the HIV/AIDS pandemic. The global annual

incidence of sexually transmitted diseases other than AIDS is estimated at 250 million cases. At least 350 million people are chronic carriers of the hepatitis B virus and another 100 million are chronic carriers of the hepatitis C virus. Up to a quarter of them will die of related liver disease.

Noncommunicable diseases are responsible for at least 40% of deaths in developing countries and 75% in industrialized countries. Cardiovascular disease, cancer, and diabetes mellitus cause not only severe disability, but kill some 25 million people each year. Injury and violence constitute an increasing cause of death and incapacity. Three hundred million suffer from some sort of mental or neurological illness. There are increasing numbers of people who, having survived a serious illness or accident, have long-term disabilities. There are increasing numbers of elderly who live longer and often need health care. While no figure can be given for global prevalence of disability, 10% might be accepted as an approximation.

Over one third of children under five in the world still suffer from malnutrition. Micronutrient deficiency, especially iodine deficiency, is a major public health problem in 118 countries. Vitamin A deficiency blinds more than a quarter of a million children every year.

WHO's Reproductive Health programme (WHO, 1996) cites the following selective aspects of reproductive ill-health. Worldwide there are 120 million couples with unmet family planning needs; 585,000 maternal deaths annually, 20 million cases of severe maternal morbidity annually, 20 million unsafe abortions annually, 20 million adults living with HIV/AIDS, two million women living with invasive cervical cancers; and 85-110 million women with female genital mutilation.

There continue to be enormous burdens on health care services. Yet, the capacity of many national health systems is already stretched to the limit and substantial increases in the resources allocated to health work are unlikely to be forthcoming. Nurses and midwives have the potential for cost-effective care which will make a

major impact on many of these health problems. Indeed, the *World Development Report 1993* noted that the most cost-effective way to provide essential care is through a combination of public health strategies and a package of essential primary care services, most of which can be provided by nurses and midwives (World Bank, 1993).

It is within this context that resolution WHA45.5, “Strengthening nursing and midwifery in support of strategies for health for all”, was adopted by the World Health Assembly in May 1992 (see Appendix A). This resolution was explicitly designed to address the following pressing problems:

- the growing demand for, and cost of, health care in countries around the world;
- the continued shortage of nursing and midwifery personnel and the urgent need to recruit, retain, educate, and motivate sufficient numbers to meet present and future community health needs;
- the need to increase WHO’s nursing and midwifery activities at all levels; and
- the need to demonstrate commitment to nursing and midwifery as essential services in all countries, for the development and improvement of health for all strategies.

The resolution recognized that in order to deal with these problems, nursing/midwifery needed to be strengthened throughout the world. Therefore, resolution WHA45.5 urged Member States to:

1. identify their nursing and midwifery service needs and, in this context, assess the roles and utilization of nursing and midwifery personnel;

2. strengthen managerial and leadership capabilities and reinforce the positions of nursing and midwifery personnel in all health care settings and at all levels of service, including the central and local services of health ministries and the local authorities responsible for the programmes concerned;
3. enact legislation, where necessary, or take other appropriate measures to ensure good nursing and midwifery services;
4. strengthen education in nursing and midwifery, adapt educational programmes to the strategy for health for all, and revise them where appropriate, in order to meet the changing health care needs of populations;
5. promote and support health services research that will ensure the optimal contribution of nursing and midwifery to health care delivery, with particular emphasis on primary health care;
6. ensure appropriate working conditions in order to sustain the motivation of personnel and improve the quality of services;
7. ensure the allocation of adequate resources (financial, human, and logistic) for nursing and midwifery activities; and
8. ensure that the contribution of nursing and midwifery is reflected in health policies.

The Health Assembly also recommended the establishment of a Global Advisory Group on Nursing and Midwifery (GAG) to advise the Director-General of WHO on the implementation of the resolution and monitor the extent of progress in implementation. The study reported here was designed to assist GAG in carrying out its mandate to monitor progress in implementation of the resolution.

Methods

Questionnaire

The study was conducted between November 1993 and August 1995. Since no data sources were available to indicate the extent of implementation of the resolution, data were collected using a survey questionnaire developed for the study. The intent was to provide points of reference for evaluating not easily quantifiable phenomena such as efforts to strengthen nursing and midwifery services. Initially the GAG and WHO staff established a broad framework for evaluation of progress in implementing resolution WHA45.5. Then the research team developed a questionnaire structured around the eight elements of the resolution, refined the questionnaire, and piloted it in March 1994 (see Appendix B).

The 37-item questionnaire, titled "Strengthening Nursing and Midwifery in Support of Strategies for Health for All: Monitoring Progress of Implementation of World Health Assembly Resolution WHA45.5," began by asking countries whether they had assessed needs for and utilization of nursing and midwifery services and the roles and functions of nurses and midwives in relation to changing needs and the roles and functions of other health staff. Countries responding "yes" to these three questions were asked to provide the most important findings; those responding "no" were asked whether such assessments were intended in the next three years.

The questionnaire then asked whether the numbers of senior nursing and/or midwifery positions at the central (ministry) level and at operational (region, province, district) levels had increased since passage of the resolution. Those responding "yes" were asked to specify the changes. Those responding "no" were asked whether increases were planned in the next three years. Additional questions asked whether there had been an increase in managerial and leadership training for nurses and midwives and whether such increases were planned.

Next, countries were asked whether legislation or regulations had been reviewed or enacted in order to ensure quality nursing and midwifery services and

education. Again, those responding "yes" were asked to specify and those responding "no" were asked whether such developments were planned in the next three years.

On the topic of education, country representatives were asked first to indicate whether nursing and midwifery curricula had been changed to strengthen primary care content and whether the overall quality of basic, continuing, and post-graduate education in nursing/midwifery had been reviewed/updated. Next they were asked whether financial resources for these three levels of education had changed and whether there had been any change in the number of fellowships supporting the education of nurses at basic and post-graduate levels. A final question asked whether more nurses and midwives had access to university education since the passage of resolution WHA45.5.

The next set of questions focused on whether there had been any increase in health services research initiatives examining the contributions of nursing and midwifery to health care delivery and whether such research was planned within the next three years. Then, in the area of working conditions, countries were asked whether there had been any increase in salaries or benefits and career opportunities for nurses and midwives and whether increases were planned. The adequacy of resources was addressed by questions on whether there had been any change in the number of budgeted posts for nurses and midwives and whether such changes were planned. In all cases, those responding "yes" were asked to specify.

Three final questions on progress in implementing the resolution explored whether there had been any change in the contribution of senior nurses and midwives to health policy development, whether there had been any major policy change in order to strengthen nursing/midwifery, and whether there was a written/documented national action plan for nursing/midwifery development.

Countries identified whether the ministry of health had a nursing or midwifery unit or a combined unit, a chief nurse or chief midwife, a focal point for

nursing or midwifery or a combined focal point, or other relevant organizational structure pertaining to nursing and/or midwifery. Finally, countries were asked whether resolution WHA45.5 was translated into the country's official language(s) and distributed to relevant officials/nurses/midwives.

To ensure face validity, the questionnaire was reviewed by WHO headquarters staff and the regional nursing advisers in the six WHO regions. They examined the questionnaire for clarity and completeness. The questionnaire was also submitted to the WHO Headquarters Focal Group on Questionnaires, which approved its appropriateness and ethical acceptability. The questionnaire was distributed in five languages – French, German, Russian, Spanish, and English.

After approval and translation, 209 questionnaires were sent in late August 1994 to the six regional offices, who forwarded them to all national ministries of health in their region, or the equivalent health authority, following the WHO Official List of Addresses, accompanied by an explanatory letter, signed by the Regional Director, requesting cooperation. Reminders concerning the distribution of the questionnaires were sent in March and June of 1995. The results reported in this document relate only to the 190 WHO Member States' responses (see Appendix C for a list of Member States by WHO region and by level of economic development).

Data Analysis

The Quality of Nursing Worklife Research Unit staff at the University of Toronto entered and analyzed the data using two software programmes: *SPSS for Windows (version 6.0)* for the quantitative data and *Ethnograph (version 4.0)* for the comments made in response to open-ended questions. Data

were validated to ensure the accuracy of data entered. Unless directed by the scale affixed to a question, the data were coded 1 for a "yes" response, 0 for a "no" response, and missing for items for which there was no response.

Initially the frequency of each response was determined for each item on the questionnaire. Data were then sorted by region, and by level of economic development as reported in the *World Development Report 1993* (World Bank, 1993). To examine relationships among the responses, the three assessment items (need, utilization, and role and function) were summed to create an "Assessment Done" scale, and each questionnaire item (both activity completed and activity planned) was then correlated with the Assessment Done scale. The correlations between questionnaire responses and amount of international aid were also calculated.

The comments made in response to open-ended questions were transcribed verbatim. Based on a review of these comments, the researchers created a series of key words for coding the comments, and two independent raters coded them. Inter-rater reliability was tested three times. During the reliability tests, key words were refined and previously coded data were recoded to ensure that the same coding definitions were employed throughout. To facilitate interpretation of the data, the co-principal investigators and other research team members then collapsed the data into 16 broad themes, including "shortage", "deployment", "concerns about roles and functions", etc. Once coding was completed frequency counts for each theme were calculated by region and level of economic development. (The broad themes, their related key words, and examples are included in Appendix D.)

Results

The findings of this survey are organized according to the eight elements of resolution WHA45.5 on strengthening nursing and midwifery. Thus, the findings are presented under the following headings: Assessment of Nursing and Midwifery Resources, Strengthening Management and Leadership for Nursing and Midwifery, Enacting Legislation, Strengthening Education, Promoting Research, Improving Working Conditions, Ensuring Adequate Resources, and Ensuring the Contributions of Nursing and Midwifery to Health Policy. Under each heading, the findings are first presented for the total number of Member States and then are examined by WHO region and level of economic development as determined by the World Bank. A moderately strong relationship was found between region and level of economic development (contingency coefficient .61, $p = .0001$). Therefore,

regional differences observed in the findings may also reflect differences in the level of economic development in different regions. (Responses from non-Member States are summarized in Appendix E.)

Response Patterns

The response rate for this survey was high with 150 Member States returning completed questionnaires, for an effective response rate of 79%. Forty Member States did not return questionnaires. The response patterns by region are presented in Table 1. The Western Pacific Region had the highest response rate (96%) with only one Member State not returning a questionnaire, and the Eastern Mediterranean Region had the lowest response rate at 55%.

Table 1 Member States' response patterns by region

Region	Number of Member States	Number of Member States responding	% response rate	Number of non-respondents	Non-respondent distribution by level of economic development (cell total)			
					Low	Lower-middle	Upper-middle	High
Africa	46	29	63%	17	9 (32)	5 (10)	3 (4)	- (0)
Americas	35	32	91%	3	0 (4)	1 (18)	2 (10)	0 (3)
Eastern Mediter-ranean	22	12	55%	10	3 (6)	4 (8)	2 (4)	1 (4)
Europe	50	42	84%	8	- (0)	2 (18)	4 (13)	2 (19)
South-East Asia	10	9	90%	1	0 (8)	1 (2)	- (0)	- (0)
Western Pacific	27	26	96%	1	0 (6)	0 (13)	0 (2)	1 (6)
Total	190	150	79%	40	12 (56)	13 (69)	11 (33)	4 (32)

In the African Region the majority of countries (70%) are classified by the World Bank at the low economic level. Not surprisingly then, the majority of non-respondents from this region (53%) were in the low economic category. In the Region of the

Americas the highest proportion of Member States (51%) are classified in the lower-middle economic level; however, two of the three non-respondents were in the upper-middle economic category. In the Eastern Mediterranean Region, Member States are

distributed across all four economic categories (low = 6, lower-middle = 4, upper-middle = 4, high = 4). Non-responses were also distributed across all economic levels (low = 3, lower-middle = 5, upper-middle = 2, high = 1). In the European Region four of the eight non-respondents were in the upper-middle economic category and two more at the high economic level. The one non-respondent Member State from South-East Asia was in the lower-middle economic category and the one from the Western Pacific Region was from the high economic category. These data do not suggest any correspondence between level of economic development of Member States and non-responses, except within the African Region.

Assessment of Nursing and Midwifery Resources

Reported Methods of Assessment

The assessment of nursing and midwifery resources involved examination of three dimensions: needs, utilization, and roles and functions. A variety of approaches were taken by countries to conduct these assessments, including assessments at the central government level, assessments by professional nongovernmental bodies, and assessment by consultants, researchers, or nursing and midwifery panels. The methods employed ranged from informal evaluations to carefully designed research studies. A few countries attempted to design assessments of needs for nursing and midwifery within the context of integrated health and human resource planning. In other countries, nursing and midwifery were evaluated separately from other health professions. A number of countries reported that need estimates were based on retrospective evaluations of the numbers of nurses and midwives needed; others used patient classification systems to determine the numbers of nurses and midwives required to meet patient demand. Uzbekistan reported using population predictions and Portugal reported examining disease trends to determine needs. Lao People's Democratic Republic, Latvia,

Norway, and the Republic of Moldova reported examining current resources relative to standards of practice and quality of health services delivered. Other countries reported that assessments were done by sector or clinical area (Kyrgyzstan, Netherlands, Nicaragua, and Trinidad and Tobago) or at the level of the facility (Argentina, Costa Rica, Maldives, and Zimbabwe). Poland reported that assessments were completed only in the area of primary health care.

Methods of assessing roles and functions of nurses and midwives included review of standards of nursing and midwifery practice and related job evaluations (Kyrgyzstan), review of job descriptions (Costa Rica, El Salvador, Jamaica, and Nepal), and work measurement studies used to analyze components of tasks and functions (Canada). Some Member States reported that nursing and midwifery roles were reviewed as part of broader health system re-engineering (South Africa and United States of America [henceforth USA]).

Assessment of needs for and utilization of nursing services. Over half (55%) of all Member States indicated that they had completed an assessment of nursing service needs since 1992, and 54% had completed an assessment of nursing service utilization (Table 2). About three quarters of Member States in the Western Pacific Region had completed a nursing needs assessment since 1992; in contrast only 22% of the African Region countries had done so. In several regions, over 60% of Member States reported that a nursing utilization assessment had been completed (European Region, Region of the Americas, South-East Asia Region, and Western Pacific Region).

Overall, about a quarter of Member States planned to assess nursing service needs (27%) and utilization (23%) in the next three years. The Western Pacific Region countries had the highest percentage of Member States (37%) indicating that a nursing needs assessment was planned, and the Region of the Americas had the highest percentage (31%) indicating that an assessment of nursing utilization was planned.

Table 2 Percentage of Member States reporting completed or planned assessments of nursing and midwifery needs, utilization, and roles, by region

Region	N	Service	Assessment of need		Assessment of utilization		Assessment of roles & functions	
			Completed	Planned	Completed	Planned	Completed	Planned
Africa	46	Nursing	22%	33%	33%	24%		
		Midwifery	30%	15%	33%	9%	33%	26%
Americas	35	Nursing	63%	27%	66%	31%		
		Midwifery	43%	14%	40%	20%	54%	43%
Eastern Mediterranean	22	Nursing	50%	5%	32%	9%		
		Midwifery	27%	-	23%	-	18%	23%
Europe	50	Nursing	72%	28%	66%	28%		
		Midwifery	50%	12%	36%	12%	56%	28%
South-East Asia	10	Nursing	60%	10%	60%	20%		
		Midwifery	30%	-	20%	10%	50%	20%
Western Pacific	27	Nursing	74%	37%	67%	15%		
		Midwifery	48%	11%	48%	7%	59%	37%
Total	190	Nursing	55%	27%	54%	23%		
		Midwifery	40%	11%	35%	11%	46%	31%

Table 3 summarizes the responses to assessment questions by level of economic development. The highest percentages of Member States which had completed assessments (needs 81% and utilization 72%) were among countries at a high economic level.

Assessment of needs for and utilization of midwifery services. Overall, fewer Member States reported completing assessments of midwifery service needs (40%) and utilization (35%) than assessments for nursing needs (55%) and utilization (54%). Generally comparable percentages of Member States in all regions reported midwifery need and utilization assessments. There was also little variability in the percentages of midwifery need and utilization assessments across levels of economic development.

Approximately 11% of Member States reported plans to conduct these assessments in the next three

years. Percentages reporting such plans were lowest among countries at a high level of economic development, perhaps reflecting the fact that nearly half (47%) of these countries had already completed both assessments.

Assessment of roles and functions for nursing and midwifery personnel. Overall, 46% of Member States indicated that they had assessed the roles and functions of nursing personnel since 1992 while 31% indicated that they planned such an assessment within the next three years. The lowest percentage (18%) of the Eastern Mediterranean Region Member States had completed such an assessment, but 23% planned to do so; the highest percentage of Member States which had completed this assessment was in the Western Pacific Region (59%). Notably, 66% of the Member States at the high level of economic development reported an assessment of roles and functions.

Table 3 Percentage of Member States reporting completed or planned assessments of nursing and midwifery needs, utilization, and roles, by level of economic development

Level of economic dev't	N	Service	Assessment of need		Assessment of utilization		Assessment of roles & functions	
			Completed	Planned	Completed	Planned	Completed	Planned
Low	56	Nursing	43%	30%	45%	27%		
		Midwifery	38%	16%	36%	11%	36%	36%
Lower-middle	69	Nursing	61%	33%	52%	28%		
		Midwifery	46%	9%	32%	12%	49%	33%
Upper-middle	33	Nursing	39%	27%	54%	21%		
		Midwifery	24%	12%	30%	15%	36%	30%
High	32	Nursing	81%	6%	72%	9%		
		Midwifery	47%	6%	47%	3%	66%	16%
Total	190	Nursing	55%	27%	54%	23%		
		Midwifery	40%	11%	35%	11%	46%	31%

Assessment of Nursing and Midwifery Resources – Qualitative Findings

One hundred and twenty-nine of the 190 Member States provided descriptions of the findings of their needs assessments, 114 countries commented on the findings of utilization assessments, and 81 countries gave comments on their roles and functions assessments. The most frequent comments were related to education, shortages (and surpluses), regulations, and concerns about roles and functions.

Education. Globally, there is consensus that nurses and midwives should receive more education than is currently available. Identified educational needs included continuing education and the need for access to both basic and postbasic university education. Respondents noted a need to increase knowledge related to the professional and scientific bases of nursing and midwifery practice. For example, one country reported that, “100% of nurses feel they need to learn more about what they are doing.” A number of countries (Australia, Belize, Estonia, Haiti, Hungary, Republic of Moldova, Russian Federation, St. Vincent and the Grenadines, and Solomon Islands) noted a need for university

preparation of nurses and midwives and the need for continuing education and specialty training was also frequently reported (Australia, Bahamas, Canada, China, Cuba, Fiji, Ghana, Kiribati, Malaysia, Marshall Islands, Panama, St. Vincent and the Grenadines, Senegal, Togo, and United Kingdom of Great Britain and Northern Ireland [henceforth United Kingdom]). Needs for better preparation in anaesthesia, intensive care, mental health, primary health care (PHC), nursing process, and respiratory therapy were specifically mentioned, as was the need to train nurses and midwives to work in different sectors of the health care system. A need for more skills in PHC in the community and in nurse clinics was identified by Iceland, Kiribati, Kyrgyzstan, and Singapore.

Shortages. Shortages were reported in the numbers of caregivers and shortages of particular skills were also reported. Some shortages were related to poor utilization patterns. Several Member States indicated that needs for services in their countries were beyond the current skill level of nurses (Argentina, Chile, and Ghana) and midwives (Hungary, Niue, and Tuvalu). However, Bangladesh, Burundi, China, Cuba, Dominican Republic, El Salvador, Estonia, Haiti, Indonesia, Jamaica, and

Malaysia noted that the skills of nurses were underutilized. And Ghana, Italy, and Singapore said the skills of midwives were underutilized. Few countries reported any unemployed nurses and midwives or said there was an oversupply of nursing and midwifery personnel, though other sources indicate that there are unemployed nurses and midwives in some countries. Where surpluses were noted, they were most often reported as imbalances related to deployment within a country (e.g. Canada) or as artificial surpluses in that nurses and midwives were needed but lack of financial resources for health care limited their utilization. Belarus reported anticipating an oversupply of nurses in the next few years. A few countries reported that supply equaled demand.

Deployment issues included unclear policies for deployment, and shortages in specific clinical areas, rural areas, and specific sectors of the system. For example, Poland reported an excess number of nurses in ambulatory services, but shortages in hospitals, particularly in large cities. Benin reported that nurses and midwives who had been deployed to the "interior of the country" had returned to larger cities. Eritrea reported shortages of nurses and midwives in provincial health services and stations. The Gambia reported a 10% attrition rate for all health professionals and acute shortages of trained nursing and midwifery staff in rural health facilities. Venezuela and Western Samoa reported shortages in community settings as well. Some Member States (Australia, Cyprus, Iceland, Sweden, and United Kingdom) reported an increasing demand for services as a result of increased patient acuity. Others noted expanded roles of nurses and midwives and uneven distribution of staff on wards (e.g. St. Christopher and Nevis). Some Member States (Cyprus, Norway, Singapore, and Solomon Islands) reported that nurses and midwives were not available for deployment to areas of need due to family considerations and the inability to balance work pressures and family obligations. Other countries expressed concern about the impact of extensive overtime, absenteeism, and shortages caused by nurses' preferences to work part-time. Maldives reported a need to train more nationals to replace the expatriate nurses that were imported to meet system needs. Several Member States (Cook Islands, Latvia, Trinidad and Tobago, and USA) reported concerns about the ageing of well trained and experienced

workers and small numbers of qualified younger personnel available to fill positions. The Cook Islands reported that 70% of their registered nurses were in the 51-55 year age group. Comments on shortages in particular regions are briefly summarized below.

African Region. In the African Region, Ghana and Namibia reported shortages in midwifery personnel, Mauritania reported shortages in nursing personnel, while Burundi reported shortages in both nursing and midwifery personnel. Shortages were said to be particularly acute in areas where there has been rapid development of hospital and community programmes. For example, while enrollments in training programmes have increased in Burundi, services will be insufficient until 2000. There is an estimated shortage of 7,000 nurses in Kenya. Furthermore, "severe shortage of midwives in remote rural areas" were reported by Namibia as well as Sierra Leone.

Region of the Americas. In 1994, a 24,000 shortfall in nurses was reported by Colombia. Trinidad and Tobago reported a shortage of nurses trained in paediatrics, trauma care, and primary health services. El Salvador also reported a "limited involvement of nurses in community services", Bolivia reported a shortage of nursing personnel and midwives for home births in rural areas, and Haiti reported "an inadequate representation of staff". Costa Rica reported that shortages of nurses were due to poor motivation and incentives for nurses. Dominica reported a shortage of midwives, while Venezuela reported shortages of nurses, midwives, and supplies.

Eastern Mediterranean Region. One country reported shortages of nurses in some specialties. Iraq reported shortages in specialist nurses and midwives who were nationals. Another country reported a lack of nurses and midwives as well as a lack of supplies and equipment to perform routine caregiving activities. Cyprus reported shortages of nurses in the private sector and in the primary health care services of the public sector.

European Region. Several countries in the European Region reported shortages. Hungary noted that the supply would not meet future needs for

nursing personnel. Greece reported a current shortfall in the number of midwives; Iceland “requires 60 new midwives in the next three years, particularly in the primary health care field”. Poland reported that the number of nurses needed in primary health care had increased by 10% and these personnel needed to be reallocated from general practitioner practice to the community. Ukraine reported a need for 34,000 additional nurses in 1995. Shortages were reported in both community nursing and long term care facilities in Norway. In France approximately 20% of nursing service needs were not currently met. Denmark reported an increased demand for community nursing to care for the elderly. Slovakia reported sectorial imbalances, excesses in hospital care and shortages in home care. In Sweden, “shortages exist for specialized nurses in anaesthesia, intensive care, and x-ray treatment”. Latvia reported that, “since 1993 more than 2,000 nurses left their work”. Ireland reported shortages of nurses with specialist skills, especially operating room and intensive care, and Tajikistan reported shortages of nurses in operating theatres, clinics, and laboratories.

South-East Asia Region. Maldives, in the South-East Asia Region, reported that the number of available local staff was very limited and there was a need to train more nursing students both within the country and abroad. India reported a shortage of nursing personnel, inappropriate nurse-to-bed ratios and poor status of nurses. Thailand reported a need for nurses to care for critically ill patients.

Western Pacific Region. Tuvalu reported a shortage of nurses, especially male nurses. China reported a need for more and better trained nurses and midwives. In Japan, “there is a need of 5,000 home visiting nurses at the community level” to care for elderly, palliative, and psychiatric patients. The Republic of Korea reported that they need to increase the number of nursing students in order to meet the health care needs of the population in the year 2010. Additionally, Brunei Darussalam, Fiji, Malaysia, Marshall Islands, Palau, Philippines, Solomon Islands, and Western Samoa all reported shortages of nurses and midwives.

Regulations. Many countries noted that better regulations were needed for nursing (Dominica, Malaysia, Mongolia, Turkey, and Tuvalu) and midwifery practice (Canada, Costa Rica, Mongolia, and Togo). Specifically, countries indicated a need for role definitions, policies and procedures, regulations for practice, and update of laws and legislation. Respondents indicated that improved regulation would promote higher standards of practice and enhance accountability and control mechanisms.

Concerns about roles and functions. Concerns about roles and functions of nurses and midwives took a variety of forms and were often related to changes in the demand for services and the utilization of nurses and midwives. Many issues were raised about the available skill mix; Dominica and Iraq, for example, reported a need for more specialized skills for nurses. Panama and Sweden too reported that many categories of workers existed and in many instances overlapped. Canada, El Salvador, and Guinea Bissau expressed concern that often the least skilled workers were doing the greatest amount of direct patient care. St. Vincent and the Grenadines indicated that while nurses had midwifery preparation, they were not able to utilize these skills and Ghana reported that trained midwives were actually leaving the practice as a result of their inability to use their skills. The poor fit between needs and skills was reported by Bangladesh, Philippines, Poland, and Tuvalu to lead to underutilization of skills, role overlap between nurses, midwives and doctors, and poor quality care.

Bangladesh reported a shortage and inadequate utilization of nurses and a need to review roles and functions. Other countries in the South-East Asia Region expressed concern that in hospital settings nurses' workload was increasing and because roles were not well defined, nurses' skills were underutilized and they were involved in a number of “non-nursing” functions. Some Member States in the high economic development category reported that highly trained midwives played only a supporting role in birthing due to societal preference for deliveries by obstetricians.

Strategies used to enlarge nurses' job functions included increasing management functions (Brunei Darussalam and Kyrgyzstan), enhancing interpersonal communications, and developing

systems to reduce task-oriented approaches to care and enhance patient centred care activities (Kyrgyzstan and Spain). In addition, some countries were adding specific clinical skills for nurses such as cardiac rehabilitation, diabetic counselling, and community psychiatric nursing, and life-saving skills in midwifery (Kyrgyzstan, Nepal, Singapore, and Tonga).

Some Member States (Canada, France, Malta, Singapore, and Thailand) reported restructuring nurses' and midwives' work to enhance involvement of families and expand the teaching and emotional support roles of practitioners. Other Member States reported a need for nurses to take on work traditionally performed by doctors (Thailand, Tuvalu, and United Kingdom). Some countries reported the need to enhance the professional and scientific bases of nursing and midwifery practice. For example, in Maldives, public awareness of health has increased and, as a consequence, there is increased demand for high quality services. Health care expectations were not consistent with the current task orientation of nursing. Nurses' knowledge base and skills need to be improved and performance evaluations need to be consistent with

advanced professional competence. Many Member States (e.g. Colombia and Slovakia) reported that economic considerations had provided the impetus for reviewing and redefining all roles in the health care system.

Strengthening Management and Leadership for Nursing and Midwifery

A third (32%) of the Member States said they had increased the number of senior nursing and midwifery positions at the central (ministry) level since 1992, while 22% reported a plan to increase the number of central level positions over the next three years. A higher percentage of Member States (44%) reported increases in nursing positions at the operational level since 1992; 24% indicated that such changes were planned over the next three years. The majority of Member States (64%) reported increases in the number of nurses and midwives receiving training to strengthen leadership and management skills. This information is displayed by region in Table 4 and by level of economic development in Table 5.

Table 4 Percentage of Member States reporting completed or planned increases in nursing/midwifery positions and training opportunities, by region

Region	N	Central (ministry) level Increase of senior positions		Operational (e.g. region, province, district) level Increase of senior positions		Increase in number receiving training to strengthen managerial and leadership capacity	
		Completed	Planned	Completed	Planned	Completed	Planned
Africa	46	22%	24%	33%	24%	50%	15%
Americas	35	31%	23%	51%	23%	77%	26%
Eastern Mediterranean	22	23%	14%	41%	5%	46%	14%
Europe	50	36%	18%	38%	30%	66%	38%
South-East Asia	10	30%	40%	80%	10%	80%	0%
Western Pacific	27	48%	26%	52%	33%	78%	19%
Total	190	32%	22%	44%	24%	64%	23%

Table 5 Percentage of Member States reporting completed or planned increases in nursing/midwifery positions and training opportunities, by level of economic development

Region/level of economic development	N	Central (ministry) level Increase of senior positions		Operational (e.g. region, province, district) level Increase of senior positions		Increase in number receiving training to strengthen managerial and leadership capacity	
		Completed	Planned	Completed	Planned	Completed	Planned
Low	56	34%	32%	50%	23%	70%	13%
Lower-middle	69	35%	25%	39%	33%	58%	30%
Upper-middle	33	24%	12%	39%	12%	58%	18%
High	32	28%	9%	47%	16%	75%	28%
Total	190	32%	22%	44%	24%	64%	23%

A number of countries commented on the increased numbers of nurses and midwives at central ($n = 67$) and operational ($n = 84$) levels. Several respondents indicated that more nursing than midwifery posts had been developed at the central level. Some respondents (Cook Islands, Poland, and Slovakia) indicated that while posts had been created, finances did not allow them to fill the positions. Many Member States indicated that there was a great deal of variation in job titles, classifications, job functions, and line authority for new senior positions. Reported new posts included positions in programmes such as AIDS and social security in Honduras; prison services in the United Kingdom; human resources in Argentina, Dominican Republic, and Spain; maternal and child services and health insurance planning in Japan; and sexually transmitted diseases and diarrhea programmes in the Dominican Republic. A separate nursing unit headed by a Director of Nursing was established in the Ministry of Health in Myanmar. Senior level positions were created in Belarus, Georgia, and Malta; a National Nursing Center was created in China; and a National Nursing Expert Unit was founded in Viet Nam. Nurses in Nepal were reported to be filling other senior level posts in health or to be involved in managerial and policy making for overall health services. In Mongolia, for example, “in order to improve management of nursing service, [a] Department of Medical Care was set up. In August, 1994, a 22 member Nursing Council was established by the Ministry of Health by the Minister’s

order...13 members of the Council are nurses and midwives.” In some Member States where no senior posts had been created, respondents indicated that they consulted with professional nursing bodies on issues (Burundi, Guinea-Bissau, Sao Tome and Principe, and Tuvalu).

New posts had also been created at operational or regional levels. Following the large earthquakes, Armenia had opened several new maternity homes. In Tuvalu, “50% of trained midwives are now posted to outer islands”. In Ghana, the number of senior nursing and midwifery posts had increased through promotions. In one Eastern Mediterranean Region country, new hospitals and primary health care units were creating opportunities for more senior positions at the regional level. Many respondents (e.g. Canada, Costa Rica, Eritrea, Haiti, Nicaragua, and Sweden) indicated that decentralization of the structures supporting the delivery of health services had provided nurses and midwives with opportunities for increased influence in the system. Interestingly, many of the high economic level Member States reported an increase in the number of senior nursing positions and a broadening of the scope of nurses’ functions, but few countries in the other economic categories reported this development and many commented “no change”.

Many respondents commented on initiatives that were being planned ($n = 37$) or had been enacted ($n = 112$) to increase leadership and management skills. A number of Member States reported increased

enrollments of nurses in university programmes at basic, postbasic, (Australia, Barbados, Canada, Cuba, Cyprus, Guatemala, Jamaica, Spain, Suriname, Tajikistan, Ukraine, and USA) and graduate levels (Canada, Colombia, Jamaica, Nepal, Norway, and USA). In 1995, five nurses enrolled in a PhD programme in Lesotho. Italy, the Russian Federation, and Venezuela indicated that their university nursing programmes had incorporated management and leadership content. Armenia, Burundi, Cuba, Denmark, and Trinidad and Tobago all planned to integrate nursing and midwifery leadership content into university programmes. In Mongolia, a three-year higher education training programme for nurses had been established. Some Member States reported an increase in the number of “study leaves” to enroll in university programmes with administrative content in other countries (Bahamas, Bhutan, Brunei Darussalam, Cambodia, Gambia, Latvia, Micronesia [Federated States of], Namibia, and Singapore). In some countries nurses and midwives were receiving formal management and leadership training along with other health

disciplines (Belarus, Haiti, Kazakhstan, Sierra Leone, and Uzbekistan) or plans were underway for this joint training (Burundi and Paraguay).

Honduras reported that short, targeted programmes sponsored by a variety of funders (e.g. Project HOPE, International Council of Nurses [ICN]) had been made available to nurses and midwives. Other countries (Bolivia, Kiribati, and Niue) stated that such programmes were planned if international aid could be found to support them. Less formal approaches were reported by 42 Member States, including in-services, seminars, and efforts by nurses and midwives to advance this knowledge and skills on their own (see Table 6 for a list of these countries by region). Some Member States, however, reported that few opportunities were available for nurses and midwives to gain management and leadership training (Belize, Cook Islands, India, Kenya, Kiribati, Lao People’s Democratic Republic, Panama, and United Republic of Tanzania).

Table 6 Member States, by region, commenting on the use of in-services, seminars, and efforts by nurses and midwives to advance their knowledge and skills on their own

REGION	Africa	Americas	Eastern Mediterranean	Europe	South-East Asia	Western Pacific
	Burundi Côte d’Ivoire Ghana Guinea-Bissau Malawi Namibia South Africa Uganda United Republic of Tanzania	Antigua & Barbuda Argentina Brazil Colombia Dominica Grenada Haiti Honduras Paraguay Peru Venezuela	Cyprus Egypt Kuwait Pakistan Saudi Arabia United Arab Emirates	Bulgaria Estonia Krygyzstan Republic of Moldova Russian Federation Slovakia United Kingdom	Bhutan Maldives Myanmar Thailand	Malaysia Republic of Korea Singapore Solomon Islands Viet Nam
Total	9	11	6	7	4	5

Enacting Legislation

Half of the Member States indicated that legislation and/or regulations aimed at ensuring quality nursing services and education had been enacted or reviewed since 1992 (Table 7). A smaller

number of countries (26%) indicated that such reviews had been completed for midwifery. Plans to conduct a review within three years were reported more frequently for nursing (27%) than for midwifery services (13%) (see Tables 7 and 8).

Table 7 Percentage of Member States reporting enacted or planned legislation/regulations aimed at ensuring the quality of nursing and midwifery services and education, by region

Region	N	Enacted or reviewed legislation/regulations		Planned to enact or review legislation/regulations	
		Nursing	Midwifery	Nursing	Midwifery
Africa	46	35%	26%	13%	9%
Americas	35	60%	26%	34%	9%
Eastern Mediterranean	22	23%	9%	27%	5%
Europe	50	58%	30%	34%	20%
South-East Asia	10	30%	10%	40%	30%
Western Pacific	27	74%	37%	26%	11%
Total	190	50%	26%	27%	13%

Table 8 Percentage of Member States reporting enacted or planned legislation/regulations aimed at ensuring the quality of nursing and midwifery services and education, by level of economic development

Level of economic development	N	Enacted or reviewed legislation/regulations		Planned to enact or review legislation/regulations	
		Nursing	Midwifery	Nursing	Midwifery
Low	56	43%	23%	21%	16%
Lower-middle	69	51%	28%	35%	10%
Upper-middle	33	42%	15%	24%	15%
High	32	66%	38%	25%	9%
Total	190	50%	26%	27%	13%

One hundred sixteen countries commented on issues associated with nursing and midwifery regulations and legislation. Member States in the low and lower-middle economic development levels reported attempts to determine what laws should be

in place for nursing and midwifery services (United Republic of Tanzania), attempts to develop nursing and midwifery boards (Bangladesh, El Salvador, Honduras, Malaysia, Maldives, Namibia, and Tonga), revision of nursing regulations for the

Nursing Council (Thailand), and the development of standards, following the direction provided by ICN workshops (Bolivia, Dominican Republic, Ghana, Lithuania, and Zimbabwe). Tuvalu reported that assistance from their WHO regional office had enabled them to develop and submit draft legislation to the government. Several Member States reported that legislation on nursing and midwifery had been passed since 1992 (e.g. Canada, Ireland, Grenada, Marshall Islands, Myanmar, Namibia, Philippines, Slovakia, St. Christopher and Nevis, and St. Lucia). Thirty-one Member States reported that draft legislation was waiting to be passed. Seven Member States indicated that legislation was in the process of review. Some Member States (e.g. Jamaica and Turkey) reported that legislation related to nursing and midwifery had been drafted and submitted but was stalled at the Ministry of Health (MOH) level. A few countries reported that no legislation existed – Guinea-Bissau, St. Vincent and the Grenadines, and Spain.

Countries reported various types of new regulations and legislation. Several Member States reported the development and implementation of new standards for clinical and ethical practice (Belize, Dominican Republic, Jamaica, Krygyzstan, Micronesia [Federated States of], Norway, Philippines, Republic of Korea, Sweden, and Viet Nam). Others reported that new guidelines for

standards of nursing education had been passed (Azerbaijan, Brazil, Burundi, Canada, Congo, Dominican Republic, Haiti, Hungary, Kenya, Malta, Senegal, and Ukraine), or new laws had extended the duration of nursing educational programmes (Australia, Estonia, and Latvia). Estonia indicated that secondary education was now an admission requirement for nursing education; and Italy, Slovenia, and the United Kingdom reported passage of regulations to make the baccalaureate necessary for entry into nursing practice. Legislation passed in Namibia and Nicaragua had granted nurses the right to self regulation.

Strengthening Education

Approximately 61% of Member States reported that nursing curricula had been changed to strengthen primary health care (PHC) content and 48% reported that PHC content had been strengthened in midwifery curricula (Table 9). Basic education for both nurses and midwives had been reviewed/upgraded in 66% of Member States, continuing education had been reviewed/upgraded in 58% of Member States, and postbasic education in 48%. This information is presented by region in Table 9 and by level of economic classification in Table 10.

Table 9 Percentage of Member States reporting strengthening of PHC content in curricula and review/upgrade of the quality of nursing/midwifery education, by region

Region	N	Change in curricula to reflect strengthening of primary health care content		Review/upgrade of quality of nursing/midwifery education		
		Nursing	Midwifery	Basic	Continuing	Post-graduate
Africa	46	50%	50%	48%	37%	30%
Americas	35	74%	37%	83%	71%	54%
Eastern Mediterranean	22	46%	41%	50%	50%	32%
Europe	50	58%	50%	70%	62%	64%
South-East Asia	10	60%	70%	80%	60%	30%
Western Pacific	27	82%	52%	74%	74%	59%
Total	190	61%	48%	66%	58%	48%

Table 10 Percentage of Member States reporting strengthening of PHC content in curricula and review/upgrade of the quality of nursing/midwifery education, by level of economic development

Level of economic development	N	Change in curricula to reflect strengthening of primary health care content		Review/upgrade of quality of nursing/midwifery education		
		Nursing	Midwifery	Basic	Continuing	Post-Graduate
Low	56	63%	59%	68%	55%	39%
Lower-middle	69	62%	46%	64%	58%	52%
Upper-middle	33	52%	33%	58%	52%	46%
High	32	66%	47%	75%	69%	56%
Total	190	61%	48%	66%	58%	48%

Respondents’ comments indicated that many strategies had been employed or were planned by Member States in order to assess programme quality and enhance primary care content in nursing and midwifery programmes. The types of reviews and plans varied in rigour from simple content reviews (Chile, Dominica, Guinea-Bissau [nursing only], Peru, St. Vincent and the Grenadines, Thailand, and Viet Nam) to integration of assessments of quality and PHC relevance in an established programme of curriculum review and renewal (Canada and United Kingdom). Some Member States reported that they did not have programmes to review; rather, their personnel attended foreign programmes (Burundi, Micronesia [Federated States of], and Tuvalu). New Zealand’s MOH reported that education for nursing and midwifery was not part of the health mandate and declined to comment on activities that might have been undertaken by other ministries.

Programme changes reported included increasing the requirements for entry into nursing and midwifery education programmes (Estonia, Malta, Russian Federation, Suriname, and Sweden) and moving basic education into the university (e.g. Malawi and Myanmar). This university education, as a minimum standard for entry into practice, was considered necessary to improve nurses’ competencies for changing and expanding roles. Some Member States reported deliberate strategies to increase the number of baccalaureate, master’s, and doctorally prepared nurses and midwives (Bahamas, Dominican Republic, Estonia, Japan,

Malawi, Malta, Slovakia, and Viet Nam); others reported developing educational standards and evaluating programmes based on those standards (Republic of Korea), and implementing regional examinations to monitor knowledge of PHC content. Nicaragua reported that while improvements to basic education had been made, improvements in practice were just beginning to emerge.

To improve nurses’ PHC content skills, several Member States reported the development of continuing education programmes focusing on such practical skills as breast feeding and family planning (Chile, Kazakhstan, Kyrgyzstan, Lithuania, and Tonga). Armenia, Columbia, and South Africa reported that continuing education on PHC for nurses and midwives was part of multidisciplinary programmes.

Some Member States indicated that while the MOH might report increased efforts to improve the quality of education and expand PHC content in curricula, disagreement existed between the nursing and midwifery professions and the government about the extent to which changes had actually occurred. Clearly, in many countries nurses and midwives feel that government has a poor understanding of PHC and the curricula needed to drive such efforts. While there is a great deal of rhetoric about enhancing the quality of nursing and midwifery education in these countries, political and personal conflicts block substantive improvements in the quality and content of educational programmes. For example, some Member States reported that curriculum renewal

models suggested by MOHs were not consistent with the professional goal of university degree minimum for entry into practice. Other Member States reported that continuing education and advanced education were considered irrelevant by key policy decision makers in health ministries.

Financial Resources for Education

Overall, 32% of Member States reported an increase in the financial resources for basic nursing and midwifery education; 12% reported a decrease

and 27% reported no change (Table 11). Eighty percent of the countries in South-East Asia reported an increase in the financial resources for basic nursing/midwifery education. The greatest percentage of countries reporting a decrease in resources (18%) was noted in the European Region. The Western Pacific Region countries most often (44%) reported that no changes had occurred in the financial resources dedicated to nursing and midwifery basic education.

Table 11 Percentage of Member States reporting changes in the financial resources available to support education for nursing and midwifery, by region

Region	N	Education level	Change in financial resources available to support education			
			Increase	No change	Decrease	Information not available
Africa	46	Basic	26%	22%	13%	39%
		Continuing	24%	20%	11%	46%
		Post-graduate	15%	17%	17%	50%
Americas	35	Basic	26%	31%	14%	29%
		Continuing	17%	37%	11%	34%
		Post-graduate	17%	31%	14%	37%
Eastern Mediterranean	22	Basic	36%	9%	0%	55%
		Continuing	18%	18%	14%	50%
		Post-graduate	14%	9%	9%	68%
Europe	50	Basic	28%	32%	18%	22%
		Continuing	24%	32%	14%	30%
		Post-graduate	22%	30%	14%	34%
South-East Asia	10	Basic	80%	10%	0%	10%
		Continuing	70%	20%	0%	10%
		Post-graduate	40%	30%	0%	30%
Western Pacific	27	Basic	37%	44%	7%	11%
		Continuing	44%	26%	4%	26%
		Post-graduate	52%	22%	7%	19%
Total	190	Basic	32%	27%	12%	29%
		Continuing	27%	27%	11%	35%
		Post-graduate	24%	24%	13%	40%

Over a quarter (27%) of Member States reported an increase in financial resources for **continuing** education; 11% reported a decrease in financial resources for continuing education. The greatest increases in resources occurred in the South-East Asia Region where 70% of Member States reported increases; this was followed by the Western Pacific Region with 44% of its Member States reporting increases (Table 11). The percentage of Member States reporting decreases in financial resources for continuing education were largest (14%) in the Eastern Mediterranean and European Regions.

About 48% of Member States reported that financial resources for **post-graduate** education had increased or at least remained the same since 1992.

A decrease was reported in 13% of Member States. The greatest cuts in funding for post-graduate education were reported from Member States in the African Region (17%), the Region of the Americas and the European Region (both 14%).

The greatest percentage of Member States reporting increases in financial resources for **basic** nursing and midwifery education were among countries classified in the low economic development level (43%) and the greatest percentages reporting decreases in resources were in high and lower-middle levels of economic development (16%) (see Table 12).

Table 12 Percentage of Member States reporting changes in the financial resources available to support education for nursing and midwifery, by level of economic development

Level of economic development	N	Education level	Change in financial resources available to support education			
			Increase	No change	Decrease	Information not available
Low	56	Basic	43%	25%	7%	25%
		Continuing	39%	25%	9%	27%
		Post-graduate	29%	23%	11%	38%
Lower-middle	69	Basic	23%	33%	16%	28%
		Continuing	16%	33%	15%	36%
		Post-graduate	15%	30%	17%	38%
Upper-middle	33	Basic	27%	21%	6%	46%
		Continuing	15%	21%	9%	55%
		Post-graduate	24%	18%	12%	46%
High	32	Basic	38%	25%	16%	22%
		Continuing	44%	22%	6%	28%
		Post-graduate	34%	16%	6%	44%
Total	190	Basic	32%	27%	12%	29%
		Continuing	27%	27%	11%	35%
		Post-graduate	24%	24%	13%	40%

Overall, increased resources for **continuing** education were reported most frequently in high economic Member States (44%) and low economic

Member States (39%). Proportionately more Member States in the high economic and low economic levels of development also reported

increases in resources for post-graduate education. Member States in the lower-middle category of economic development reported most often that resources had not changed for each of the three types of education.

Fellowships

Overall, 23% of Member States reported an increase in financial resources for fellowships in basic education and 25% reported an increase in fellowships for post-graduate education (Table 13). Nearly 50% of respondents indicated that their resources had decreased or the information was not available. Over a quarter indicated that there had been no change in the resources for fellowships for basic and post-graduate nursing and midwifery education. Countries in the South-East Asia Region most often reported increases in the numbers of

fellowships for basic education of nurses and midwives (60%). In comparison with other regions, the African Region and the Region of the Americas reported proportionately more often that the resources available had been reduced, or, in the Region of the Americas, there had been no change. Almost 50% of the African Region countries and 60% of the Eastern Mediterranean Region countries indicated that fellowship information was not available. It should be noted that Member States were not asked to give the amount of financial resources; thus, even though an increase was reported, it could have been minimal (e.g. one additional fellowship). See Table 14 for an analysis of changes in fellowship resources by level of economic development.

Table 13 Percentage of Member States reporting changes in the financial resources supporting fellowships for nurses and midwives, by region

Region	N	Education level	Change in resources supporting fellowships			
			Increase	No change	Decrease	Information not available
Africa	46	Basic	17%	17%	17%	48%
		Post-graduate	24%	11%	20%	46%
Americas	35	Basic	11%	46%	17%	26%
		Post-graduate	9%	40%	20%	31%
Eastern Mediterranean	22	Basic	23%	9%	9%	60%
		Post-graduate	27%	5%	9%	59%
Europe	50	Basic	24%	34%	10%	32%
		Post-graduate	18%	36%	4%	42%
South-East Asia	10	Basic	60%	20%	10%	10%
		Post-graduate	80%	0%	0%	20%
Western Pacific	27	Basic	33%	37%	4%	26%
		Post-graduate	37%	41%	4%	19%
Total	190	Basic	23%	29%	12%	36%
		Post-graduate	25%	26%	11%	38%

Table 14 Percentage of Member States reporting changes in the financial resources supporting fellowships for nurses and midwives, by level of economic development

Level of economic development	N	Education level	Change in resources supporting fellowships			
			Increase	No change	Decrease	Information not available
Low	56	Basic	38%	21%	13%	29%
		Post-graduate	43%	13%	11%	34%
Lower-middle	69	Basic	13%	33%	19%	35%
		Post-graduate	15%	36%	13%	36%
Upper-middle	33	Basic	12%	30%	6%	52%
		Post-graduate	18%	21%	12%	49%
High	32	Basic	31%	31%	3%	34%
		Post-graduate	25%	31%	3%	41%
Total	190	Basic	23%	29%	12%	36%
		Post-graduate	25%	26%	11%	38%

The comments by respondents on changes in financial resources to support education and fellowships to assist nurses and midwives to attend programmes highlight the impact of the global recession (Armenia, Kazakhstan, and Kyrgyzstan) and the political turmoil that has existed in some Member States since 1992. A number of respondents indicated that devaluation of their currency and general cuts in the overall health budget resulted in the actual reduction of resources available for education and fellowships (Benin, Bulgaria, Congo, Côte d'Ivoire, Ghana, Italy, Lithuania, Mongolia, and USA). Niger and Suriname reported no change or a slight increase in targeted financial resources, but said that they were in fact losing ground as a consequence of devalued currencies and inflation; the buying power of the currency provided was less. Angola reported that political instability had destabilized pre-existing educational structures and restorative action was now the goal. Bolivia reported that financial resources for education continued to be unavailable to nurses and midwives but several strategies were being explored to pressure the government into action. Congo indicated that operating monies did not come from the government; educational institutions had to function on academic fees received from students. Kenya reported the

introduction of “cost sharing” strategies to bridge the gap created by funding shortfalls.

Some respondents indicated that increased resources had been made available for all three types of educational programmes (Antigua and Barbuda, Canada, Cuba, Denmark, Indonesia, Iraq, Malaysia, Maldives, Malta, Singapore, Tajikistan, Tonga, Viet Nam, and Zimbabwe). In some instances this was in response to major restructuring of nursing and midwifery programmes (South Africa and United Kingdom). Some Member States indicated that severe shortages of nurses and midwives had resulted in an increase in the number of basic and postbasic programmes (e.g. Denmark, though for midwifery only) and in the availability of fellowships for nurse practitioner and post basic preparation (USA). Several of the low and lower-middle income Member States reported that much of the improvement in the financial resources for education and fellowship programmes was a result of programmes and projects supported by donor agencies (Bangladesh, Dominican Republic, Fiji, Honduras, Kiribati, and Poland). Guinea-Bissau reported that funding for basic training increased for midwives but decreased for nurses, and funds for higher-level training decreased for both.

Access to University Education

Overall, 47% of Member States indicated that since 1992 more nurses and midwives had gained access to university education. The greatest percentage of countries noting an increase in access to university education was in the South-East Asia Region where 80% of the countries reported

increased access for both nurses and midwives. The smallest percentage of countries reporting an increase was in the African Region with only 28% of Member States reporting increased access to university education. Table 15 shows the percentage of Member States reporting increased access by region and by level of economic development.

Table 15 Percentage of Member States reporting increased access to university education since 1992, by region and level of economic development

		N	Increased access to university education
Region	Africa	46	28%
	Americas	35	51%
	Eastern Mediterranean	22	36%
	Europe	50	52%
	South-East Asia	10	80%
	Western Pacific	27	59%
Level of economic development	Low	56	52%
	Lower-middle	69	41%
	Upper-middle	33	42%
	High	32	56%
Total		190	47%

One hundred and one countries provided explanatory comments in response to the question on university access. Many respondents indicated that nurses and/or midwives had increased access to university education (Australia, Brazil, Canada, China, Cyprus, Dominican Republic, Ghana, Guatemala, Guyana, Honduras, Hungary, Iceland, Indonesia, Kenya, Latvia, Lesotho, Lithuania, Malaysia, Malta, Nicaragua, Peru, Portugal, Republic of Korea, Sierra Leone, Slovakia, Slovenia, Uganda, United Kingdom, USA, and Viet Nam). Spain reported that university access for nurses had existed since 1977 and Sweden reported access since 1982. Antigua and Barbuda, Colombia, Jamaica (nursing only), Kiribati, and Trinidad and Tobago reported increased access but said that there was less

funding available to pursue admission to university. Costa Rica, El Salvador, and India reported increased access to private colleges and universities for nurses. Several countries (Dominica, Estonia, Fiji, Poland, and Venezuela) reported no change in access to university education. In Argentina, increased access to university programmes was reported to result from severe shortages of nursing and midwifery staff. Many countries reported the use of distance education programmes (Honduras, Namibia, Sri Lanka, and Turkey) or the need to seek advanced preparation outside of the country because university programmes did not exist for nurses within the country (Bahamas, Bhutan, Central African Republic, Gambia, Lao People's Democratic Republic, Malta, Namibia, Papua New Guinea,

Tonga, and Western Samoa). In Zimbabwe, access to master's education was available in the country but students were also sent to the United Kingdom and the USA for such training. Other countries reported that nurses can receive advanced preparation through medical schools (Central African Republic, China, Krygyzstan, Russian Federation, Tajikistan, and Turkmenistan). Some countries in the low and lower-middle category of economic development report that programmes for university preparation were under review (e.g. Kazakhstan and Papua New Guinea). While basic education is not available at the university level for many nurses in these countries, some respondents indicated that nurses go to universities to pursue studies in law and medicine, in Haiti, for example.

St. Vincent and the Grenadines remarked that if nurses can mobilize the funds, study leave is usually granted. While distance education is available for nurses in Honduras, such opportunities do not exist for non-professional midwives since "90% of midwives are perceived to be illiterate." Some respondents indicated that creative strategies such as pilot programmes were available to facilitate the conversion of nursing and midwifery diplomas to degrees or to upgrade diploma programmes to

university programmes (Denmark, Ireland, Malta, and Singapore). Germany and New Zealand reported that information on access to universities in their countries was not available at the Ministry of Health level.

Promoting Research

Globally, 33% of Member States reported an increase in health service research initiatives which examined the contribution of nursing and midwifery to health care delivery. The highest proportions of countries that had allocated financial resources to the study of nursing and midwifery problems were in the Western Pacific Region, Region of the Americas, and South-East Asia Region (41%, 40%, and 40%, respectively). The lowest percentage of Member States reporting an increase in financial resources dedicated to health service research since 1992 were in the Eastern Mediterranean (23%) and African (24%) Regions. Table 16 gives the range of responses across region. Table 17 gives the range across income levels. The percentage of Member States reporting increases in health service research initiatives ranged from 18% in the upper-middle economic category to 47% in the high economic category.

Table 16 Percentage of Member States reporting increases and planned increases in health services research initiatives on the contribution of nursing and midwifery to health care delivery, by region

Region	N	Increase in health services research initiative	
		Increased	Planned
Africa	46	24%	35%
Americas	35	40%	66%
Eastern Mediterranean	22	23%	18%
Europe	50	36%	38%
South-East Asia	10	40%	50%
Western Pacific	27	41%	56%
Total	190	33%	43%

Table 17 Percentage of Member States reporting increases and planned increases in health services research initiatives on the contribution of nursing and midwifery to health care delivery, by level of economic development

Level of economic development	N	Increase in health services research initiative	
		Increased	Planned
Low	56	30%	38%
Lower-middle	69	36%	57%
Upper-middle	33	18%	33%
High	32	47%	34%
Total	190	33%	43%

Descriptions of the increases in health services research initiatives since 1992 varied in number and nature (71 countries commented here). Comments were related to the identification of nursing and midwifery research problem areas, structural arrangements to support research, and financial resource issues. The term research had different meanings to different respondents. For example, several countries reported curriculum evaluations (Congo, India, Nepal, and Senegal) and operational reviews (Costa Rica, Malaysia, Namibia, Solomon Islands, Thailand, Ukraine, Zambia, and Zimbabwe) as research initiatives, while others reported more traditional peer reviewed health services research (Australia, Belgium, Canada, Netherlands, Sweden, United Kingdom, and USA). The initiatives reported by Member States varied greatly in content. This variation seemed to be tied to the region and level of economic development, as described below.

The research foci reported included studies examining decision making in nursing practice (United Kingdom), disinfection techniques and their effectiveness (Cambodia), perinatal health care delivery (Armenia and USA), interventions aimed at health promotion during pregnancy (Cambodia), decubitus and falls (Barbados), and primary health care (Bolivia and Kazakhstan). Health system research areas included programme evaluations (Central African Republic), local and long-term recruitment issues (Singapore), research in nursing education (Bolivia and Nepal), roles and functions of nurses/midwives (Australia, Costa Rica, Indonesia, Nepal, Nicaragua, Tonga, and USA), nursing innovations (United Kingdom), the nursing process

(China) and nursing’s contribution to health care (Canada, Cuba, Nepal, United Kingdom, and USA). Several countries emphasized that quality assurance studies were their major research areas (Cambodia, El Salvador, Indonesia, Germany, Tonga, USA, and Zimbabwe). Many of the countries classified as high income reported evaluative research on health programmes that had been previously developed and implemented (Canada, United Kingdom, and USA). Both Cuba and Honduras reported studies to examine nursing resources. Some countries noted that research initiatives had begun but they did not comment on the nature of the studies (Côte d’Ivoire, Japan, and Poland). New Zealand reported that it was not known whether research was being conducted.

The nature of structural arrangements developed to support research also varied. These arrangements seemed to fall into five key areas: creating awareness of the need for research, providing education to prepare researchers, forming research groups, influencing policy to direct resources to nursing and midwifery studies, and participating in peer reviewed research activities with other health service researchers. How these activities were operationalized seemed to vary by region and level of economic development.

Some Member States in the African and Western Pacific Regions reported that nurses and midwives received education in health services research and were then assigned to project teams in different regions of the country (e.g. Philippines, United Republic of Tanzania, and Zambia). Kenya reported that educational programmes were planned to

sensitize nursing and midwifery personnel to research. Belarus, Namibia, Niger, and South Africa reported that the thesis work done by graduate students was the only research being conducted. Often the recommendations from these studies were reviewed by government for possible implementation. Brazil reported that the amount of research activities was increasing as the number of nurses and midwives with graduate education increased. In order to create awareness of the need for research and to accelerate research programmes, some countries reported the appointment of a chair of clinical nursing research within university programmes (Australia, Canada, Denmark, Netherlands, United Kingdom, and USA), while others reported that guidelines for research projects were being developed (e.g. Russian Federation). A strategy used by Canada, Côte d'Ivoire, the Dominican Republic, Lesotho, Philippines, Thailand, the United Republic of Tanzania, and the USA was the use of training programmes to develop research skills in practising nurses and midwives. Hungary and the United Republic of Tanzania reported that they were beginning research activities by creating an awareness of the need for research. Other strategies reported included collaborating with ongoing WHO programmes of research and with joint initiatives of WHO and funding agencies such as UNICEF (Armenia and Dominican Republic). Some high economic status Member States in the Region of the Americas (Canada and USA) and the European Region (Belgium, Netherlands, and United Kingdom) reported that nurses and midwives participated at the national level in the development of research agendas and set priorities with funding agencies. They also participated as members of multidisciplinary research review teams that made recommendations to governments about projects to be funded based on scientific merit.

Issues surrounding financial resources for research were commented on by a number of Member States. Five respondents indicated that there were no funds available for research (Panama, Papua New Guinea, Paraguay, Peru, and Western Samoa). Paraguay also stated that there was no support for research. Fiji reported that although attempts had been made, nurses and midwives did not have access to existing research funds. However, as noted above, many respondents indicated that since 1992 fellowships for graduate study had increased and

funds had been targeted for health services research related to nursing and midwifery. Iceland, for example, reported that an increasing number of midwives were being funded to study midwifery problems and plans existed to extend the level of investment in nursing research.

Globally, 43% of Member States reported plans to increase research activities related to nursing and midwifery services over the next three years (Table 16). Sixty-six percent of the countries in the Region of the Americas said that there were plans to increase the amount of resources dedicated to health services research on the contribution of nursing and midwifery over the next three years. In contrast, only 18% of the countries in the Eastern Mediterranean Region reported such plans.

Areas listed as problems for future research included both clinical and health service topics. Clinical research questions planned for exploration included clinical effectiveness (Bahamas, Chile, Dominican Republic, Paraguay, and Slovakia), primary health care for urban populations (Canada, Costa Rica [especially midwifery], Kazakhstan, and USA), collection of baseline data for geriatric/gerontology services (St. Vincent and the Grenadines), evaluation of the contribution of nurses/midwives to health care delivery (Nicaragua, Sierra Leone, and USA), self-care for mental health patients, nursing education (Viet Nam), leadership in mental health nursing, and reduction in perinatal mortality (Panama). Health services research topics included examination of burnout syndrome in nursing (Hungary), social aspects of research, including health and social inequities (United Kingdom), evaluations of nursing and midwifery curricula (St. Vincent and the Grenadines and Sweden), and reviews of health services research already conducted (Central African Republic, Honduras, Namibia, Singapore and Solomon Islands). India planned studies to examine how many nurses would be required in the future.

Several respondents indicated that research activities were planned but there were financial obstacles to the conduct of the research (Argentina, Kiribati, Latvia, Papua New Guinea, Peru, Sierra Leone, Trinidad and Tobago, Turkey, and United Republic of Tanzania). One country remarked that the motivation of nurses and midwives to participate in research is low (Jamaica). One country reported

that many nurses and midwives become frustrated because they take the initiative and the time to participate in research but never get any feedback on the outcome of the studies conducted. Antigua and Barbuda, Mongolia, and the Russian Federation indicated that research guidelines for nursing will be developed in 1995. Australia, Bolivia, Kyrgyzstan, and the USA reported that research is planned due to recent increases in funding.

Improving Working Conditions

Since the European Regional Office deleted the items on working conditions for nurses and

midwives from the questionnaire they sent to Member States, this analysis does not include the European Region data. Overall, an increase in salary and benefits since 1992 was reported by 53% of Member States. Nearly all countries in the South-East Asia Region (90%) reported that salary and benefits had been improved, while only 32% of the countries in the Eastern Mediterranean Region reported improvements in salary and benefits and only 30% indicated that changes were planned. Table 18 summarizes improvements in working conditions by region and Table 19 summarizes improvements by level of economic development.

Table 18 Percentage of Member States reporting increases in salaries or benefits and improvement in career opportunities, by region*

Region	N	Increase in salaries or benefits for nursing/midwifery personnel		Improvement in career opportunities for nurses and midwives	
		Increased	Planned	Improvement	Planned
Africa	46	44%	28%	30%	33%
Americas	35	57%	43%	49%	51%
Eastern Mediterranean	22	32%	14%	18%	23%
South-East Asia	10	90%	30%	60%	40%
Western Pacific	27	67%	30%	67%	48%
Total	140	53%	30%	42%	39%

*excluding European Region data

Table 19 Percentage of Member States reporting increases in salaries or benefits and improvement in career opportunities, by level of economic development*

Level of economic development	N	Increase in salaries or benefits for nursing/midwifery personnel		Improvement in career opportunities for nurses and midwives	
		Increased	Planned	Improvement	Planned
Low	56	70%	29%	48%	43%
Lower-middle	51	43%	35%	41%	37%
Upper-middle	20	25%	10%	20%	25%
High	13	62%	46%	54%	54%
Total	140	53%	30%	42%	39%

*excluding European Region data

In total, 81 countries commented on improvements to salaries and benefits and the ways in which these adjustments were made. How salary and benefit adjustments were made varied by country. In many instances, when nurses and midwives were part of the civil service, they received annual or periodic increments provided for the entire civil service in relation to job classifications; their salaries would increase, decrease, or stay the same depending on the whole civil service budget (Antigua and Barbuda, Bahamas, Cambodia, Canada, Dominica, Eritrea, Ghana, Guinea-Bissau, India, Indonesia, Malawi, Micronesia [Federated States of], Myanmar, Namibia, Palau, Papua New Guinea, Sao Tome and Principe, Sierra Leone, Solomon Islands, Sri Lanka, St. Vincent and the Grenadines, Thailand, United Republic of Tanzania, and Vanuatu). In some countries, the MOH is not involved in all nurses' and midwives' salary and benefit adjustments; these were the responsibility of the public (Chile) or private organizations (Argentina, Gambia, New Zealand, and USA) for which nurses and midwives work.

Some salary and benefit increments were reported as an outcome of union or professional body negotiations (Australia, Honduras, and Kiribati), resolutions put forward by government (Mongolia and Venezuela), or the establishment of a Pay Commission (India). Canada reported that in some regions salary and benefits had increased, but in other regions of the country they had decreased. In Lao People's Democratic Republic, improved salary and benefits were tied to the severe shortages of nurses and midwives and were seen as incentives to attract individuals into these professions. Some respondents indicated that as roles and functions were being restructured and new categories of workers introduced, new salary and benefit levels were being introduced (Canada, India, and Palau).

The majority of the 55 countries commenting indicated that both salary and benefits had increased since 1992; for example there was a 140% increase in Uganda. However, many countries reported that salary and benefit increases were tied to inflation (Colombia, Fiji, Mauritania, and USA) or were frozen due to economic adjustments (Brazil). Often, though salaries had increased the increases did not match inflation; in countries where currency had been devalued (e.g. Guyana), the salary increments had no net effect on buying power. In Viet Nam, salary increases were reported but salaries remained

low. In Zambia and Thailand nurses are paid shift differentials and overtime. Benin and Canada reported that salaries had decreased due to across-the-board reductions to all civil servants made in order to balance budgets. Common benefit improvements included maternity benefits for female employees (Sri Lanka), uniform expenses (Nepal and Zambia), accommodation and housing allowances (Uganda), remote areas allowance (Lesotho), long service medal (China), and an enforced pension system (Republic of Korea).

Some respondents (52 countries) indicated that annual salary adjustments over the next three years were planned. Some countries indicated that performance reviews were planned as a job evaluation tool that should result in increases in salary and benefits (Canada and Nicaragua). Many countries reported that negotiations with unions or professional organizations were underway and salary and benefit adjustments were anticipated in the next three years (Antigua and Barbuda, Burundi, Canada, Colombia, Japan, Malaysia, Western Samoa, and Zambia). The Philippines anticipated salary increments because educational requirements for entry into programmes and the programmes themselves were improving. In other countries, changes in benefits and salary awaited legislative approval (Angola, Guinea-Bissau, Haiti, Honduras, and Philippines). Financial instability (Argentina and Congo) and political instability (Sierra Leone) left some respondents with no opportunities for salary reviews or increments. As one respondent indicated, "We keep hoping for a miracle" (Cook Islands).

Improved career opportunities for nurses and midwives were reported by 42% of Member States (Table 18) and 39% indicated that plans were underway to improve career opportunities in the next three years. Two thirds (67%) of the countries in the Western Pacific Region reported that career opportunities had improved while only 18% of the countries from the Eastern Mediterranean Region indicated that career opportunities had improved since 1992. (However, this percentage may simply reflect the low response rate from this region. Four out of the nine countries actually responding to the item responded with a "yes"). Table 18 shows the countries reporting improvements in career opportunities for nurses and midwives by region, and Table 19 shows this by level of economic development.

The comments made in response to the question on career opportunities suggest that some countries defined career opportunities as a continuum of expanding roles and positions through which nurses and midwives could progress. Other countries defined career opportunities as opportunities for continuing and upgraded education. Many countries indicated that career advancement opportunities occurred primarily as a result of formal education (Brazil, Burundi, Canada, Colombia, Costa Rica, Denmark, Eritrea, Guatemala, Jamaica, Latvia, Marshall Islands, Togo, and United Republic of Tanzania). That is, better prepared practitioners were considered more competitive for promotional opportunities.

The types of career advancement identified included moving up the line to management positions (Canada, Colombia, Cyprus, Germany, Hungary, Japan, Krygyzstan, Lithuania, Malaysia [public health], Malta, Myanmar, Philippines, Republic of Korea, Russian Federation, Tonga, Tuvalu, and United Kingdom) and/or switching to positions in education (Germany, Hungary, Malta, Slovenia, United Kingdom, and Zimbabwe). Some countries reported opportunities for advancement through expanded clinical roles as clinical nurse specialists (Australia, Burundi, Canada, Eritrea, Gambia, Germany, Panama, and Uganda), nurse practitioners (Canada and USA), public health nurses (USA and Zambia), and nurses in private practice (Namibia and Slovakia). Others reported opportunities for advancement based on performance appraisal and career ladder programmes (Lao People's Democratic Republic, Singapore, and Solomon Islands). Bolivia and Guinea-Bissau reported that needs assessments and restructuring activities were currently underway and saw great opportunities in clinical practice for well prepared nurses and midwives, particularly in case management in primary health care. The establishment of formal nongovernment bodies to address the interests of nurses and midwives was seen as a vehicle to advance career opportunities in the Republic of Moldova. Many of the improvements reported were said to be the results of human resources for health (HRH) assessments completed by countries or broad efforts to restructure and streamline health service delivery.

In contrast to the countries noting improved career opportunities, Bangladesh reported that there had been no promotions in the last 15 years and Congo reported that nursing and midwifery personnel were over qualified for the positions available. Canada and Senegal reported that nursing and midwifery positions and bursaries were being cut due to financial problems. Bulgaria indicated that their goal was simply to preserve the present situation and not to fire personnel. One respondent (Norway) indicated that the failure of the government to enforce legislation (for example, mandating that RNs must lead home-based services) limited the career opportunities available. The Federated States of Micronesia reported that improved career opportunities depended on donors sponsoring programmes to improve nurses' and midwives' skills. While career opportunities were reported as improved in India, job satisfaction remained low.

Availability of continuing education was considered important for improved career opportunities in many countries (e.g. Dominican Republic and Jamaica). Respondents indicated that the types of programmes being offered included multi-disciplinary management courses (Cambodia and Viet Nam), clinical practice exchange programmes (Guatemala, Honduras, and Nicaragua), and clinical inservice programmes on diabetes, HIV, lactation management skills, etc. (Argentina, Bahamas, Bhutan, Eritrea, and Poland).

A total of 52 countries indicated that they planned to improve career opportunities for nurses and midwives over the next three years. Mongolia, Sao Tome and Principe, and Turkey indicated that general strengthening of opportunities was occurring although no plan was specified. Bolivia, Niger, Paraguay, and Senegal reported plans to restore or develop national or regional nursing directorates and thus provide new career paths. Colombia planned legislation to improve health care in the community, thus providing new opportunities for more skilled community health nurses. Several countries (Denmark, Dominican Republic, Estonia, Guatemala, Lao People's Democratic Republic, Latvia, Marshall Islands, Nicaragua, Peru, Tasmania, and Viet Nam) reported that the development of new educational programmes for nurses and midwives were expected to create more

opportunities in the future. A few countries (El Salvador, Malawi, Philippines, Tasmania, and Zambia) reported that improved health and human resource policy and practices would have a beneficial impact on career opportunities in the near future.

Creation of new roles in health service delivery was also expected to offer nurses and midwives opportunities for career advancement. Positions in management (Canada), in nurse practitioner roles (Antigua and Barbuda and Canada), in public health (USA), and in clinical specialties (Papua New Guinea) were cited by several countries. Ghana, Singapore, Togo, and Trinidad and Tobago said that they were examining strategies to improve career paths for nurses and midwives. In contrast, Central African Republic, Congo, France, Guyana, Kenya, and Western Samoa said that no changes in career opportunities were planned.

Ensuring Adequate Resources

Just under half (44%) of the Member States indicated that since 1992 there had been changes in the number of budgeted posts for nurses and midwives. The highest percentage reporting changes in budgeted nursing and midwifery posts since 1992 was in the South-East Asia Region (70% of countries indicating a change). The lowest percentage (27%) was in the Eastern Mediterranean Region. Only 31% of respondents indicated that changes in the number of posts were planned over the next three years. Fifty-two percent of the countries in the Western Pacific Region reported plans for changes while only 9% of the Eastern Mediterranean Region countries reported such plans. These percentages are shown by region in Table 20 and by level of economic development in Table 21.

High economic status countries reported most often that changes in the number of posts had occurred (66%). The percentages of Member States which planned changes in the number of budgeted posts ranged from 28% for high economic level countries to 33% for upper-middle economic level countries. A few countries (7) reported that while changes had occurred, the changes amounted to a reduction in budgeted nursing and midwifery posts.

Ninety countries commented on the adequacy of resources for nursing and midwifery. Comments

indicated that a variety of approaches were used to decide the number of budgeted posts. Cuba reported that changes in budget positions had been made as a consequence of regular annual evaluations of human resources for health. Other countries reported that the number of nursing and midwifery positions budgeted was determined by examining the number of vacant positions relative to the numbers graduating from educational programmes (Eritrea and Ireland). Some countries reported that all resource planning was completed at the central level (Côte d'Ivoire, Niger, and Zambia), while others reported that planning activities were under the jurisdiction of regional authorities or health care agencies themselves (Micronesia [Federated States of], New Zealand, Senegal, United Kingdom, United Republic of Tanzania, and USA). In some instances decisions on the number of budgeted posts were based on health needs and programme assessments (Bahamas, Cambodia, Denmark, and Netherlands). In countries reporting severe financial constraints and instability (Honduras, Hungary, and Turkmenistan), funding issues determined the number of budgeted posts.

The comments suggest that in many parts of the world the demand for nursing and midwifery services is greater than the supply. Many countries in the African Region, the Region of the Americas, Western Pacific Region, and South-East Asia Region reported severe shortages of nursing and midwifery personnel. Shortages were most frequently reported in relation to rapid growth in health care services. Respondents in all regions reported extensive shortages in areas where new hospitals had been built or new health programmes initiated; rural shortages were also identified (e.g., Antigua and Barbuda, Barbados, Gambia, Germany, Guatemala, Malaysia, St. Vincent and the Grenadines, Singapore, and Spain). Zimbabwe indicated that shortages persisted because improvements in education (e.g. increases in the number of years of training and improvements in skill levels) has slowed the rate at which graduates emerged. In many countries all new graduates were employed yet there were not enough of them to meet the need. Canada had implemented new educational programmes for midwifery to meet needs but their impact had not yet been experienced. Lao People's Democratic Republic and Turkmenistan reported difficulty in recruiting individuals into some budgeted positions

Table 20 Percentage of Member States reporting changes in the number of budgeted posts for nurses and midwives, by region

Region	N	Change in the number of budgeted posts	
		Completed	Planned
Africa	46	37%	26%
Americas	35	49%	34%
Eastern Mediterranean	22	27%	9%
Europe	50	44%	30%
South-East Asia	10	70%	40%
Western Pacific	27	56%	52%
Total	190	44%	31%

Table 21 Percentage of Member States reporting changes in the number of budgeted posts for nurses and midwives, by level of economic development

Level of economic development	N	Change in the number of budgeted posts	
		Completed	Planned
Low	56	52%	32%
Lower-middle	69	36%	30%
Upper-middle	33	27%	33%
High	32	66%	28%
Total	190	44%	31%

because of poor working conditions. In Palau and Solomon Islands, senior nursing and midwifery posts were reported difficult to fill because of the unavailability of suitable candidates.

While only a few countries reported cutbacks in nursing and midwifery posts, many countries reported that posts were unfilled because of lack of funding for positions. Countries in the European Region (e.g. Belarus, Hungary, Kazakhstan, and Turkmenistan) and countries in the middle economic categories throughout all regions (e.g. Colombia and Peru) reported that a substantial number of nursing and midwifery budgeted positions were not filled because of financial instability or because nursing positions were being converted to positions for other

personnel (Panama). Proportionately more high income countries reported that the skill mix of staff was under scrutiny; several of these countries reported that the goal was to reduce the professional to non-professional ratio (Canada and United Kingdom). In contrast, countries at other levels of economic development were working to enhance the professional skills of nurses and midwives (Argentina, Guinea-Bissau, and Jamaica).

A number of countries commented on plans to change the number of budgeted posts for nurses and midwives over the next three years. Chile, Colombia, France, India, Indonesia, Lesotho, Malaysia, Paraguay, Sao Tome and Principe, Senegal, Singapore, Solomon Islands, Togo, Viet Nam, and

Zambia reported that plans were underway to increase budgeted posts based on the shortfalls identified by needs assessments. Argentina reported the development of a programme to upgrade auxiliary worker posts to professional nursing and midwifery posts.

While some countries identified a need to increase the number of posts, financial restraint (Honduras and Western Samoa) and shortages of trained personnel (Thailand) were reported as reasons for not responding to this need. Also, potential health sector reform (Costa Rica) and financial constraints (Poland and Turkey) were cited as barriers to predicting what actions would be taken over the next few years. Several countries reported that the numbers and skill mix of nursing and midwifery personnel were currently being evaluated

(Australia, Canada, Lithuania, South Africa, United Kingdom, and USA) and adjustments would be made when these studies were complete.

Ensuring the Contributions of Nurses and Midwives to Health Policy

Globally, 54% of Member States indicated that since 1992, there had been changes in the contributions of senior level nurses and midwives to policy development. Countries in the Western Pacific Region (74%) and countries in the low and high (both 66%) levels of economic development reported most often that changes in policy contributions had occurred (Tables 22 and 23).

Table 22 Percentage of Member States reporting changes in the contribution of nurses/midwives to policy development, policy changes, and a written national action plan, by region

Region	N	Change in the contributions of senior level nurses/midwives to health policy development	Major policy changes to strengthen nursing/midwifery	Written national action plan	
				Nursing	Midwifery
Africa	46	54%	28%	28%	24%
Americas	35	51%	34%	49%	20%
Eastern Mediterranean	22	36%	36%	23%	14%
Europe	50	52%	52%	34%	18%
South-East Asia	10	60%	50%	50%	50%
Western Pacific	27	74%	63%	56%	44%
Total	190	54%	43%	38%	25%

Member States reported a variety of mechanisms and structures for nurses and midwives to contribute to policy development. Some had been implemented since 1992, while others had been in existence for years. Some respondents indicated that strategies for nurses and midwives to contribute to health policy

were in the planning phases. Others indicated that nurses and midwives had a role in developing policy only in relation to professional practice; they had no role in developing the broader health policy initiatives in which governments were involved.

Table 23 Percentage of Member States reporting changes in the contribution of nurses/midwives to policy development, policy changes, and a written national action plan, by level of economic development

Level of economic development	N	Change in the contributions of senior level nurses/midwives to health policy development	Major policy changes to strengthen nursing/midwifery	Written national action plan	
				Nursing	Midwifery
Low	56	66%	43%	48%	36%
Lower-middle	69	46%	39%	35%	23%
Upper-middle	33	39%	30%	33%	9%
High	32	66%	63%	31%	25%
Total	190	54%	43%	38%	25%

Mechanisms for Policy Impact

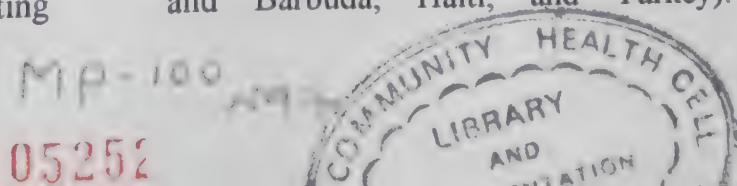
The reported mechanisms through which nurses and midwives contributed to policy development varied, based on the meaning of the term “contribution”, the level at which the contribution was made, and the types of contributions available.

At one end of the continuum, many Member States reported that nursing and midwifery had full and equal influence on policy development at the national level, through positions held in government and/or an advisory/consultative process set up with nursing and midwifery associations (Australia, Bahamas, Barbados, Belize, Benin, Bolivia, Brazil, Canada, Congo, Côte d’Ivoire, Cuba, Denmark, Eritrea, Fiji, France, Gambia, Guinea-Bissau, Guyana, Iceland, Japan, Kazakhstan, Kenya, Kiribati, Kyrgyzstan, Lithuania, Malawi, Malta, Mauritania, Namibia, Netherlands, New Zealand, Nicaragua, Niue, Palau, Papua New Guinea, Republic of Korea, Rwanda, St. Vincent and the Grenadines, Singapore, Slovenia, Spain, Solomon Islands, Sweden, Togo, Ukraine, United Kingdom, and USA). These countries viewed the contributions of nursing and midwifery as valuable and necessary for health service policy development. Thus, like other health professions, they were involved in all policy discussions that affected both the development and impact analysis of health services. Approximately 50% of all comments were related to this type of policy contribution.

Other Member States reported that nurses and midwives made policy contributions at the regional level and at the level of the individual work setting

(31% of responses). Contributions to policy at this level were associated with setting operational policies such as policies for the deployment and management of nursing and midwifery services. Countries indicating participation at this level included Burundi, Central African Republic, Chile, China, Indonesia, Jamaica, Micronesia [Federated States of], Panama, Philippines, St. Christopher and Nevis, Senegal, Sierra Leone, Thailand, Trinidad and Tobago, and Uzbekistan. Respondents frequently indicated that nurses and midwives had middle management positions in health ministries (e.g. Estonia, St. Lucia, and Zimbabwe). Some respondents indicated that nurses and midwives were given health policies to review and provide feedback; others said nurses and midwives were simply told to implement policy (Costa Rica, Ghana, Namibia, Poland, Uganda, United Republic of Tanzania, and Viet Nam). Finally, nurses in Cambodia and in some South-East Asia Region Member States (Bhutan, Maldives, Myanmar, and Nepal) had limited, but increasing input into some health and nursing/midwifery policies.

At the other end of the continuum some countries (19%) reported very limited roles or even no roles for nurses and midwives in health policy development (Angola, Belarus, Dominican Republic, Guatemala, India, Marshall Islands, Paraguay, Sao Tome and Principe, Turkmenistan, and Vanuatu). Some Member States reported that policy recommendations from the professional associations were often submitted to the MOH, but these were not given serious consideration by government (Antigua and Barbuda, Haiti, and Turkey). Several



respondents indicated that nurses and midwives had no weight in the political arena and were not recognized as having a contribution to make (Honduras, Niger, and Peru). Others suggested that while directorates for nursing and midwifery existed within government, they did not have the same status as other directorates handled by physicians (Bangladesh and Lao People's Democratic Republic). Still other respondents argued that nurses had very low status and as a female dominated group, they had no place in policy development (Argentina and Colombia).

Policy Changes

Forty-three percent of Member States reported that policy changes have been made to strengthen nursing and midwifery since 1992. Changes in policy were most often reported by Member States in the Western Pacific Region and in high economic development countries (both 63%; see Tables 22 and 23). Key policy initiatives included development of a nursing division within the MOH, improvements in educational standards and access, development of legislation, and finally, improvements in the numbers and deployment of human resources for health.

Action Plans

A written national action plan for nursing had been developed by 38% of Member States. A quarter of all Member States had developed a written national action plan for midwifery. These percentages are presented by region in Table 22 and by level of economic development in Table 23.

Comments on national action plans indicated that Member States were in one of five stages: no plans developed, plans under development, plans under review of MOH staff, plans currently being implemented, or plans fully implemented and evaluated with new plans under development. The types of initiatives included in the plans varied somewhat by level of economic development. Many of the countries at the lower economic development reported that improved delivery of services was the key element of the plan. In a number of these countries, educational programmes had been initiated to increase the numbers of caregivers and improve the quality of the care given (China, Ghana, Guyana, Indonesia, Kenya, Lao People's Democratic Republic, Maldives, Nepal, Nicaragua, Sierra Leone, Togo, Viet Nam, Zambia, and Zimbabwe).

Member States at the two middle levels of economic development generally reported a number of targeted areas in their plans, including strengthening management and education (Antigua and Barbuda, Dominica, and Western Samoa), undertaking job analysis and developing role definitions (Krygyzstan and Turkey), promoting development (Antigua and Barbuda, Argentina, Cuba, Mongolia, Namibia, and Panama), enacting legislation (Antigua and Barbuda, Malta, and Turkey), and establishing scientific support for nursing and midwifery practice (Krygyzstan and Namibia). It is difficult to determine the extent to which these action plans have been implemented. A review of the comments would suggest that, on average, if a Member State had targeted five key areas for the action plan, movement had probably been made on at least two fronts.

High economic development countries reported fewer written action plans for nursing and midwifery. Their descriptions of the plans also indicated a more integrated approach to planning. Many of these Member States were currently monitoring the impact of previous activities to strengthen nursing and midwifery education, practice, research, and policy. For example, Sweden was evaluating the implementation of competency monitoring systems, Canada, the United Kingdom, and the USA had developed vision papers on the role of nurses and midwives, and Japan was planning for health visiting in the future.

Nursing and Midwifery Support in Ministries of Health

The types of ministry or central government support structures for nursing and midwifery are presented in Table 24. Many ($n = 91$) of the respondents indicated that there was a Chief Nursing Officer in the central government structure, and 43 reported that a nursing unit existed in the MOH. Fewer respondents reported the existence of a Chief Midwifery Officer ($n = 20$) or a midwifery unit ($n = 21$) at the central government level. A combined nursing and midwifery unit was reported by 34 respondents. Respondents who did not report a Chief Nursing and/or Midwifery Officer reported that there was a focal point for nursing ($n = 15$), midwifery ($n = 9$), or a combined nursing and midwifery focal point ($n = 8$) at the central government level.

Table 24 Number and type of nursing and midwifery positions at the Ministry of Health, by region and level of economic development

	N	Type of unit			Type of focal point						
					Chief nurse	Chief midwife					
		Nursing	Midwifery	Nursing/ midwifery			Nursing	Midwifery	Nursing/ midwifery		
Region											
Africa	46	5	3	7	14	5	5	3	1		
Americas	35	15	6	2	22	3	2	1	1		
Eastern Mediterranean	22	5	2	1	6	3	-	-	-		
Europe	50	5	4	8	23	2	6	5	5		
South-East Asia	10	3	1	4	6	2	1	-	-		
Western Pacific	27	10	5	12	20	5	1	-	1		
Level of economic development											
Low	56	16	9	12	27	10	4	1	1		
Lower-middle	69	17	7	11	35	5	2	1	5		
Upper-middle	33	5	2	6	14	2	2	1	1		
High	32	5	3	5	15	3	7	6	1		
Total	190	43	21	34	91	20	15	9	8		

Extent of Distribution of Resolution WHA45.5

Over half (55%) of the Member States indicated that the resolution had been distributed only at the ministry level; the resolution had been distributed to

district level health authorities in only 16% of Member States. The extent of distribution of the resolution is presented by region in Table 25 and by level of economic development in Table 26.

Table 25 Percentage of Member States reporting distribution of resolution WHA45.5 to relevant officials/nurses/midwives, by region

Region	N	Level of distribution of resolution WHA45.5				
		Central (MOH)	Regional	Provincial	District	Elsewhere
Africa	46	44%	26%	11%	15%	17%
Americas	35	63%	37%	14%	20%	26%
Eastern Mediterranean	22	32%	0%	0%	9%	9%
Europe	50	58%	28%	18%	18%	28%
South-East Asia	10	90%	30%	20%	0%	0%
Western Pacific	27	67%	30%	19%	19%	7%
Total	190	55%	26%	14%	16%	18%

Table 26 Percentage of Member States reporting distribution of resolution WHA45.5 to relevant officials/nurses/midwives, by level of economic development

Level of economic development	N	Level of distribution of resolution WHA45.5				
		Central (MOH)	Regional	Provincial	District	Elsewhere
Low	56	54%	27%	14%	18%	14%
Lower-middle	69	54%	28%	10%	7%	15%
Upper-middle	33	48%	18%	15%	18%	18%
High	32	59%	31%	19%	28%	34%
Total	190	55%	26%	14%	16%	18%

Relationships Among Elements of Resolution WHA45.5

In order to determine whether responses to questions on the various elements of the resolution

were related, correlation analyses were conducted. First, all items related to the three types of assessment (needs, utilization, and roles) were collapsed into a subscale titled “Assessment Done”. The alpha reliability of the Assessment Done

subscale was .80 (n = 100). Scores on this scale were then examined in relation to the other elements of the resolution. The researchers expected that assessment activities would be a prerequisite for action on other elements of the resolution.

Having completed an assessment of needs, utilization, and/or roles and functions was positively correlated with having increased numbers of nursing and midwifery positions at the operational level (r = .31, p = .0001), improved career opportunities for

nurses and midwives (r = .30, p = .0001), the implementation of major policy changes to strengthen nursing and midwifery (r = .35, p = .0001), and the existence of a focal point for midwifery (r = .37, p = .041) at the central ministry level (see Table 27). Member States' completion of the assessment was also positively associated with plans to review or enact legislation related to midwifery (r = .38, p = .037).

Table 27 Correlations between completion of assessments (need, utilization, and role assessments) and completed and planned activities to strengthen nursing and midwifery

Variable	Assessment done Activities completed	Assessment done Activity planned
STRENGTHENING MANAGEMENT AND LEADERSHIP		
Increase in number of senior nursing/midwifery positions at central (ministry) level	.19*	.07
Increase in number of senior nursing/midwifery positions at operational level	.31***	.14
Increase in Numbers of nurses and midwives receiving management and leadership training	.12	.17
ENACTING LEGISLATION		
Legislation and regulation enacted or reviewed		
Nursing	.14	.19
Midwifery	.24*	.38*
STRENGTHENING EDUCATION		
Primary health care content strengthened in curricula		
Nursing	.21*	-
Midwifery	.16	-
Quality of education reviewed/upgraded		
Basic	.04	-
Continuing	.26**	-
Post-graduate	.15	-
Change in financial resources		
Basic	.12	-
Continuing	.03	-
Post-graduate	.16	-
Change in the resources for fellowships		
Basic	.20*	-
Post-graduate	.09	-
	.03	-
Increased access to university education		

Variable	Assessment done	Assessment done
	Activities completed	Activity planned
PROMOTING RESEARCH		
Increase in health services research on nursing/midwifery	.17*	.26**
IMPROVING WORKING CONDITIONS		
Increases in salaries and benefits	.18	.25*
Improved career opportunities	.30***	.13
ENSURING ADEQUATE RESOURCES		
Increase in number of budgeted posts	-.02	.13
ENSURING CONTRIBUTIONS TO HEALTH POLICY		
Change in contributions of senior level nurses and midwives to policy development	.17*	-
Major policy changes to strengthen nursing	.35***	-
Existence of national action plan		
Nursing	.18*	-
Midwifery	.16	-
Ministry Support Present		
Nursing unit	-.16	-
Midwifery unit	-.08	-
Nursing/midwifery unit	.01	-
Chief nurse	-.03	-
Chief midwife	.02	-
Focal point for nursing	.16	-
Focal point for midwifery	.37*	-
Focal point for nursing and midwifery	.15	-
Resolution Distribution		
Central level	.18*	-
Regional level	.16	-
Provincial level	.28**	-
District level	.24*	-
Translation		
Resolution translated into country's official language	.13	-

* p<.05

** p<.01

*** p<.001

A final analysis was conducted to explore the relationship between the amount of international aid a country received and completion of the elements of the resolution. For all 190 Member States, each questionnaire item response was correlated with the amount of international aid the country received,

based on the 1993 Health For All data base (WHO, 1994a) . Three items were significantly correlated with international aid received: research initiatives completed (r = .34, p = .008), written nursing national action plan (r = .35, p = .007), and written midwifery national action plan (r = .36, p = .013).

Discussion and recommendations

This study was a first attempt to describe the state of nursing and midwifery services throughout the world. At present there is no reference point from which to evaluate the findings of this study, but it is hoped that in future years the survey can be repeated to provide an ongoing summary of our progress. This report provides a substantive description and relational baseline from which further in-depth country analysis can be planned.

The study revealed that while over half of Member States had completed **assessments of need, utilization, and roles and functions** of nursing, many Member States had not. Only a quarter of Member States had completed an assessment of midwifery. Member States located in the African Region or at low level of economic development were less likely to have completed assessments. The completion of these assessments was positively associated with implementation of other key elements of resolution WHA45.5. In particular, completion of assessments was positively associated with an increase in the number of senior nursing and midwifery positions at the operational level, improved career opportunities, major policy changes to strengthen nursing and midwifery, and a chief nursing position in the central government.

The findings suggest that completing these assessments is critical to ensuring that other elements of the resolution directed at strengthening nursing and midwifery are initiated. That is, when countries have a clear picture of the status of their nursing and midwifery resources and how they are utilized and deployed, they are better positioned to ensure that other aspects of the resolution are acted upon. Countries without the resources to complete assessments may need financial and human resources to assist them in carrying out these assessments.

Because nurses and midwives are resources to ensure equitable access to health services, promote and protect health, and control or prevent specific health problems, accurate information on the numbers and use of these personnel is central to improving the health of populations. Nursing and midwifery needs assessments pointed to needs for

improved education, severe shortages in some countries and surpluses of resources in others, issues associated with deployment of personnel, and the need for regulations to ensure standards of practice and clarify roles and functions of both nurses and midwives.

Nearly two-thirds of Member States reported that they had implemented programmes to strengthen the **management and leadership functions** of nurses and midwives, yet there remains a need to increase the input of these practitioners, at regional, district, and central levels. The comments by responding Member States suggest that in some instances management and leadership positions are available but cannot be filled because of financial restrictions or because there are no individuals with the necessary skills to handle the jobs. Strengthening of nursing and midwifery education would address the problem of appropriate job qualifications for management and leadership positions.

Half the Member States said that **nursing and midwifery education** had been strengthened since 1992. In particular, primary health care had been integrated into curricula and the quality of basic, post basic, and post-graduate education had been reviewed and upgraded. Given the potential role for nurses and midwives in implementing public health strategies and primary health care, sound educational preparation is essential for these practitioners. While significant improvements in education were reported by several Member States, others reported barriers to improvements, including financial constraints, poor motivation on the part of government, and unrecognized need.

Overall, just under a third of Member States reported increases in financial resources to support basic education and fellowships for study in nursing and midwifery. Marginally more Member States reported an increase in the amount of resources for basic education than for continuing and post-graduate education. Member States in the South-East Asia Region and at the low economic development level were more apt than others to report increased funding for educational programmes. High and

middle-income countries and countries in other regions may have already achieved an adequate base funding for these programmes and may therefore not have needed increases in resources for these programmes. However, since respondents were not asked to explain why they had or had not increased resources on education, this remains speculative. Some Member States reported that funds from donors made improvements in education possible.

A number of Member States indicated that there had been no change in funding for education or funding had decreased, or information was not available. Their comments suggested that inflation, devalued currency, and political instability had had the net effect of reducing resources for education and fellowships. While the causes were multiple, approximately 70% of Member States were experiencing shortfalls in the resources necessary to support educational and fellowship programmes.

Almost half of the Member States reported that access to university education had increased since 1992. Lack of resources to fund attendance at programmes was the most frequently identified barrier to access, but many Member States reported using creative strategies such as distance education programmes and the development of programmes to convert diplomas to degrees or upgrade diploma programmes to university programmes.

A third of Member States indicated that since 1992 there has been an increase in the amount of resources dedicated to **health services research** addressing nursing and midwifery problems. Slightly more than a third indicated that such activities were planned over the next three years. Member States in the Western Pacific or South-East Asia Regions and in the high economic classifications were more apt to report increases in health services research. Respondents' comments suggest that lack of funding is the primary barrier to allocating funds for research projects and programmes to develop research skills. High income countries have the requisite structure and skills to facilitate the conduct of health services research. However, in countries where financial or human resources are lacking, research is limited. Research support appears also to be linked to having a strong voice for nursing and midwifery at the national level.

Just under half of Member States indicated that there had been an increase in the **number of budgeted posts** for nurses and midwives since 1992. Respondents described using a variety of strategies to determine which resources should be increased. However, in many parts of the world severe shortages of nurses and midwives, coupled with a transition period associated with initiating new educational programmes, limited the ability to fill posts. Inadequate resources to provide nursing and midwifery services limit access to health services. Countries must assess needs and utilization in order to determine the numbers of workers needed and ensure equitable access to health services.

Over half of the respondents indicated that changes had been made to facilitate the contributions of nurses and midwives to **policy development**. While over a third of the respondents had fairly well developed mechanisms for influencing policy, many countries did not see a role for nurses and midwives in policy development. Having completed an assessment of need, utilization, and role/function was positively associated with increasing the contributions of nurses and midwives to health policy development.

Having written national action plans for nursing and midwifery was positively associated with the amount of international aid received. Respondents at the low level of economic development receive the greatest amount of international aid, and they also reported most often that written action plans had been completed.

Summary

This survey provides only a broad description of the activities undertaken by Member States to implement resolution WHA45.5. The questionnaire used for the study was developed to provide a "quick picture" of Member States' activities and did not explore in detail any one of the elements of the resolution. The researchers make no claim on a causal relationship between resolution WHA45.5 and reports provided by Member States that are summarized in this document. We acknowledge that some respondents may have described changes since

1992 and others have described the state of nursing and midwifery services at one point in time. The comments made in response to questions provide some insight into the nature of Member States' activities. However, in some regions the response rate was low. Additionally, certain questions were not answered by some respondents. Readers should be mindful of these limitations when examining trends observed for some regions and some questionnaire items. Finally, the responses need to be interpreted in light of the social, cultural, and economic policies and conditions of the country responding. For example, while Canada and Myanmar may indicate that research activities have occurred, the nature, volume, and scope of the research that has occurred in Canada would be substantially different from that of Myanmar.

Nevertheless, this study provides a baseline understanding of the state of nursing and midwifery services throughout the 190 Member States of the World Health Organization. If we accept the proposition that the most cost-effective way to provide essential health care is through a combination of public health strategies and a package of essential primary care services, most of which can be provided by nurses and midwives, then the findings reported here point to the areas needing further development to achieve that goal. As Member States prepare targets related to health for all (HFA) outcomes for WHO's Ninth General Programme of Work (WHO, 1994b), gaps in nursing and midwifery services need to be addressed in order

to achieve these outcomes. The following recommendations can assist countries in this regard:

1. Each country should examine the current status of nursing and midwifery and set targets to be achieved during WHO's Ninth General Programme of Work.
2. Given the potential relationships between a strong nursing and midwifery workforce, cost-effective delivery of services, and improved HFA outcomes, high priority should be given to developing nursing and midwifery services in the next years.
3. This study should be repeated in 2000 to monitor continued improvements in nursing and midwifery outcomes and to examine the impact of a strengthened nursing and midwifery workforce on HFA outcomes.
4. Further study should be done at country level to determine the factors which cause countries in similar regions with similar economies to be more or less successful in strengthening nursing and midwifery services.
5. Further explorations should be made of the social, cultural, economic, and political barriers that prevent nurses and midwives, who are primarily females, from maximizing their contributions in providing cost-effective public health care and primary health care to populations around the world.

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Appendix A – The Resolution

Forty-fifth World Health Assembly

WHA45.5

Agenda item 18

11 May 1992

STRENGTHENING NURSING AND MIDWIFERY IN SUPPORT OF STRATEGIES FOR HEALTH FOR ALL

The Forty-fifth World Health Assembly,

Having considered the Director-General's report on strengthening nursing and midwifery in support of strategies for health for all, and the discussions at the eighty-ninth session of the Executive Board;

Recalling resolution WHA42.27;

Mindful of the growing demand for and cost of health care in countries throughout the world;

Concerned at the continued shortage of nursing and midwifery personnel and the urgent need to recruit, retain, educate, and motivate sufficient numbers to meet present and future community health needs;

Recognizing the need to increase the Organization's nursing and midwifery activities at all levels;

Committed to the promotion of nursing and midwifery as essential health services in all countries, for the development and improvement of health for all strategies;

1. THANKS the Director-General for his report;

2. URGES Member States to:

(1) identify their nursing and midwifery service needs and, in this context, assess the roles and utilization of nursing and midwifery personnel;

(2) strengthen managerial and leadership capabilities and reinforce the positions of nursing and midwifery personnel in all health care settings and at all levels of service, including the central and local services of health ministries and the local authorities responsible for the programmes concerned;

(3) enact legislation, where necessary, or take other appropriate measures to ensure good nursing and midwifery services;

(4) strengthen education in nursing and midwifery, adapt educational programmes to the strategy for health for all, and revise them where appropriate, in order to meet the changing health care needs of populations;

(5) promote and support health services research that will ensure the optimal contribution of nursing and midwifery to health care delivery, with particular emphasis on primary health care;

(6) ensure appropriate working conditions in order to sustain the motivation of personnel and improve the quality of services;

- (7) ensure the allocation of adequate resources (financial, human and logistic) for nursing and midwifery activities;
 - (8) ensure that the contribution of nursing and midwifery is reflected in health policies;
3. REQUESTS WHO regional committees to reinforce regional actions in order to enable Member States to implement the above provisions effectively and to identify sources for financing such actions in those States which are undergoing economic structural reform programmes or which have other special needs;
4. REQUESTS the Director-General to:
- (1) establish a global multidisciplinary advisory group on nursing and midwifery, with the express purpose of advising the Director-General on all nursing and midwifery services and in particular on:
 - (a) developing mechanisms for assessing national nursing and midwifery service needs;
 - (b) assisting countries with the development of national action plans for nursing and midwifery services including research and resource planning;
 - (c) monitoring progress in strengthening nursing and midwifery in support of strategies for health for all;
 - (2) mobilize the increased technical and financial support required to implement the provisions of this resolution;
 - (3) ensure that the interests of nursing and midwifery services are taken into account in policy implementation and programme development, and that nursing and midwifery experts participate in WHO committees as appropriate;
 - (4) strengthen the global network of WHO collaborating centres for nursing and midwifery in the implementation of health for all;
 - (5) report on progress made in the implementation of this resolution to the Forty-ninth World Health Assembly.

Eleventh plenary meeting, 11 May 1992
A45/VR/11

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Appendix B - The Questionnaire

Strengthening nursing and midwifery in support of strategies for health for all

Monitoring progress of implementation of World Health Assembly resolution WHA45.5

Country: _____

This questionnaire is intended to assist Member States to monitor progress in the implementation of World Health Assembly resolution WHA45.5 “Strengthening nursing and midwifery in support of strategies for health for all”. The process of monitoring and its results will be useful in assessing the current situation, and in providing input for the necessary policy changes to promote nursing and midwifery services as essential health services. The information which is requested in this questionnaire is a country-wide assessment and concerns both public and private health care services. In addition it is hoped that many of these questions can become indicators for national use in assessing the adequacy of nursing and midwifery.

When completing the questionnaire please distinguish between nursing and midwifery services if applicable and use the indicated space.

Assessment of Needs

Q 1.1 Since 1992, have you conducted as assessment of the **needs** for:

Nursing Services		Midwifery Services	
<input type="checkbox"/> Yes, please specify	<input type="checkbox"/> No	<input type="checkbox"/> Yes, please specify	<input type="checkbox"/> No
<hr/>		<hr/>	
<hr/>		<hr/>	
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Q 1.2 If yes, please list up to 3 most important findings, give reference if available.

<hr/>	<hr/>
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<hr/>	<hr/>

Q 1.3 If no, is it planned to make such as assessment within the next 3 years?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
<hr/>	
<hr/>	
<hr/>	

Strengthening nursing and midwifery in support of strategies for health for all
Monitoring progress of implementation of World Health Assembly resolution WHA45.5

Assessment of Utilization

Q 1.4 Since 1992, have you conducted an assessment of the deployment and utilization of:

Nursing Personnel	Midwifery Personnel
<input type="checkbox"/> Yes, please specify <input type="checkbox"/> No	<input type="checkbox"/> Yes, please specify <input type="checkbox"/> No
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

Q 1.5 If yes, please list up to 3 most important findings, give reference if available.

<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

Q 1.6 If no, is it planned to make such an assessment with the next 3 years?

☐ Yes ☐ No

Assessment of Roles and Functions

Q 1.7 Since 1992, have you conducted an assessment of the roles and functions of nurses and midwives in relation to changing needs, and roles and functions of other health staff?

☐ Yes ☐ No

Q 1.8 If yes, please list up to 3 most important findings, give reference if available.

Q 1.9 If no, is it planned to make such an assessment within the next 3 years?

☐ Yes ☐ No

Strengthening nursing and midwifery in support of strategies for health for all
Monitoring progress of implementation of World Health Assembly resolution WHA45.5

Strengthening Management and Leadership

Q 2.1 Since 1992, has the number of **senior** nursing and/or midwifery **positions** at the central level (ministry level) been increased?

☐ Yes, please specify ☐ No

Q 2.2 If no, is it planned to increase the number within the next 3 years?

☐ Yes, please specify ☐ No

Q 2.3 Since 1992, has the number of **senior** nursing and/or midwifery **positions** at the operational (e.g. region, province, district) level been increased?

☐ Yes, please specify ☐ No

Q 2.4 If no, is it planned to increase the number of **positions** within the next 3 years?

☐ Yes, please specify ☐ No

Q 2.5 Since 1992, has there been an increase in the number of nurses/midwives receiving training to strengthen **managerial** and **leadership** capacity?

☐ Yes, please specify ☐ No

Q 2.6 If no, is it planned to increase **management** and **leadership** training within the next 3 years?

☐ Yes, please specify ☐ No

Strengthening nursing and midwifery in support of strategies for health for all
Monitoring progress of implementation of World Health Assembly resolution WHA45.5

Enacting Legislation

Q 3.1 Since 1992, have there been **legislation** and/or **regulations** enacted or reviewed, aiming at ensuring quality nursing and midwifery services and education?

Nursing Services		Midwifery Services	
<input type="checkbox"/> Yes, please specify	<input type="checkbox"/> No	<input type="checkbox"/> Yes, please specify	<input type="checkbox"/> No
<hr/>		<hr/>	
<hr/>		<hr/>	
<hr/>		<hr/>	
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Q 3.2 If no, is it planned to enact/review legislation/regulations within the next 3 years?

☐ Yes ☐ No

Strengthening Education

Q 4.1 Since 1992, has there been a change in **nursing and midwifery curricula** to reflect strengthening of Primary Health Care (PHC) content?

	Yes	No
Nursing	<input type="checkbox"/>	<input type="checkbox"/>
Midwifery	<input type="checkbox"/>	<input type="checkbox"/>

Q 4.2 Since 1992, has quality of nursing/midwifery education been reviewed/upgraded in:

	Yes	No
Basic education	<input type="checkbox"/>	<input type="checkbox"/>
Continuing education	<input type="checkbox"/>	<input type="checkbox"/>
Post-graduate education	<input type="checkbox"/>	<input type="checkbox"/>

Q 4.3 Since 1992, has there been a change in the **financial resources** available to support basic education, continuing education and post-graduate education for nursing and midwifery?

	Increased	Decreased	No Change	Information Not Available
Basic education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Continuing education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-graduate education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Strengthening nursing and midwifery in support of strategies for health for all
Monitoring progress of implementation of World Health Assembly resolution WHA45.5

Q 4.4 Since 1992, has there been any change in the number of fellowships supporting basic education and post-graduate education for nurses and midwives?

	Increased	Decreased	No Change	Information Not Available
Basic education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Post-graduate education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q 4.5 Since 1992, do more nurses and midwives have access to university education?

☐ Yes, please specify ☐ No

Promoting Research

Q 5.1 Since 1992, has there been any increase in health services **research** initiatives (in terms of financial resources allocated, nursing and midwifery problems addressed, reports published) on the contribution of nursing and midwifery to health care delivery?

☐ Yes, please specify ☐ No

Q 5.2 Is such research planned within the next 3 years?

☐ Yes, please specify ☐ No

Working Conditions

Q 6.1 Since 1992, has there been any increase in **salaries** or **benefits** for nursing/midwifery personnel?

☐ Yes, please specify ☐ No

Q 6.2 Is such an increase planned within the next 3 years?

☐ Yes, please specify ☐ No

Q 6.3 Since 1992, has there been any improvement in **career opportunities** for nurses and midwives?

☐ Yes, please specify ☐ No

Strengthening nursing and midwifery in support of strategies for health for all
Monitoring progress of implementation of World Health Assembly resolution WHA45.5

Q 6.4 Is such an improvement planned within the next 3 years?

☐ Yes, please specify ☐ No

Adequate Resources

Q 7.1 Since 1992, has there been any change in the number of **budgeted posts** for nurses and midwives?

☐ Yes, please specify ☐ No

Q 7.2 Is such a change planned within the next 3 years?

☐ Yes, please specify ☐ No

Health Policies

Q 8.1 Since 1992, has there been any change with respect to the contribution of senior level nurses and/or midwives to health **policy development**?

☐ Yes, please specify ☐ No, please explain why not

Q 8.2 Since 1992, has there been any major **policy change** to strengthen **nursing/midwifery**?

☐ Yes, specify ☐ No

Q 8.3 Is there a **written national action plan** for nursing/midwifery development?

	Yes	No
Nursing	<input type="checkbox"/>	<input type="checkbox"/>
Midwifery	<input type="checkbox"/>	<input type="checkbox"/>

Q 8.4 If yes, please comment on the nature of the plan and the stage of implementation.

Strengthening nursing and midwifery in support of strategies for health for all
Monitoring progress of implementation of World Health Assembly resolution WHA45.5

Does your Ministry of Health have

- Q 9.1 A nursing unit ☐ Yes ☐ No
- Q 9.2 A midwifery unit ☐ Yes ☐ No
- Q 9.3 A nursing/midwifery unit ☐ Yes ☐ No
- Q 9.4 A chief nurse ☐ Yes ☐ No
- Q 9.5 A chief midwife ☐ Yes ☐ No

If none of the above, does your Ministry of Health have

- Q 9.6 A focal point for nursing ☐ Yes ☐ No
- Q 9.7 A focal point for midwifery ☐ Yes ☐ No
- Q 9.8 A focal point for nursing/midwifery ☐ Yes ☐ No
- Q 9.9 Other relevant organizational structure ☐ Yes ☐ No
- Q 9.10 Please describe briefly

Was resolution WHA45.5 distributed to relevant officials/nurses/midwives

- Q 10.1 At central (Ministry of Health) level ☐ Yes ☐ No
- Q 10.2 At regional level ☐ Yes ☐ No
- Q 10.3 At provincial level ☐ Yes ☐ No
- Q 10.4 At district level ☐ Yes ☐ No
- Q 10.5 Elsewhere ☐ Yes ☐ No
- Q 11 Was resolution WHA45.5 translated into your country's official language(s) ☐ Yes ☐ No

Questionnaire completed by:

(Name, Title) : _____

(Function) : _____

Date : _____

Thank you for completing the questionnaire.
Please add any comments or additional information below.
Your effort in completing this questionnaire enables WHO to provide important feedback to Member States.
This is a crucial step towards future progress.



Appendix C – Member States receiving questionnaire
by Region and Level of Economic Development
(Member States noted with an * did not return a questionnaire.)

Level of Economic Development			
Low (N = 56; 29.5%)	Lower-Middle (N = 69; 36.3%)	Upper-Middle (N = 33; 17.4%)	High (N = 32; 16.8%)
AFRICAN REGION (N = 46; 24.2% of all Member States)			
Benin Burkina Faso* Burundi Central African Republic Chad* Comoros* Equatorial Guinea Eritrea Ethiopia* Gambia Ghana Guinea Guinea-Bissau Kenya Lesotho Liberia* Madagascar* Malawi Mali Mauritania Mozambique* Niger Nigeria* Rwanda Sao Tome and Principe Sierra Leone Togo Uganda United Republic of Tanzania Zaire* Zambia Zimbabwe	Algeria* Angola Cameroon* Cape Verde* Congo Côte d'Ivoire Mauritius* Namibia Senegal Swaziland*	Botswana* Gabon* Seychelles* South Africa	
n = 32 (16.8% of total, 69.6% of region)	n = 10 (5.3% of total, 21.7% of region)	n = 4 (2.1% of total, 8.7% of region)	

Level of Economic Development				
Low (N = 56; 29.5%)	Lower-Middle (N = 69; 36.3%)	Upper-Middle (N = 33; 17.4%)	High (N = 32; 16.8%)	
REGION OF THE AMERICAS (N = 35; 18.4% of all Member States)				
Guyana Haiti Honduras Nicaragua	Belize Bolivia Chile Colombia Costa Rica Cuba Dominica Dominican Republic Ecuador* El Salvador Grenada Guatemala Jamaica Panama Paraguay Peru St. Lucia St. Vincent and the Grenadines	Antigua and Barbuda Argentina Barbados Brazil Mexico* St. Christopher and Nevis Suriname Trinidad and Tobago Uruguay* Venezuela	Bahamas Canada United States of America	
n = 4 (2.1% of total, 11.4% of region)	n = 18 (9.5% of total, 28.6% of region)	n = 10 (5.3% of total, 28.6% of region)	n = 3 (1.6% of total, 8.6% of region)	
EASTERN MEDITERRANEAN REGION (N = 22; 11.6% of all Member States)				
Afghanistan* Egypt Pakistan Republic of Yemen* Somalia* Sudan	Djibouti* Iran, Islamic Republic of* Iraq Jordan Lebanon Morocco Syrian Arab Republic* Tunisia*	Bahrain* Libyan Arab Jamahiriya* Oman Saudi Arabia	Cyprus Kuwait Qatar* United Arab Emirates	
n = 6 (3.2% of total, 27.3% of region)	n = 8 (4.2% of total, 36.4% of region)	n = 4 (2.1% of total, 18.2% of region)	n = 4 (2.1% of total, 18.2% of region)	

Level of Economic Development			
Low (N = 56; 29.5%)	Lower-Middle (N = 69; 36.3%)	Upper-Middle (N = 33; 17.4%)	High (N = 32; 16.8%)
EUROPEAN REGION (N = 50; 26.3% of all Member States)			
	Albania* Armenia Azerbaijan Bulgaria Czech Republic Georgia Kazakhstan Kyrgyzstan Poland Republic of Moldova Romania* Slovakia Slovenia Tajikistan Turkey Turkmenistan Ukraine Uzbekistan n = 18 (9.5% of total, 36.0% of region)	Belarus Bosnia and Herzegovina* Croatia* Estonia Federal Republic of Yugoslavia* Former Yugoslav Republic of Macedonia* Greece Hungary Latvia Lithuania Malta Portugal Russian Federation n = 13 (6.8% of total, 26.0% of region)	Austria* Belgium Denmark Finland France Germany Iceland Ireland Israel Italy Luxembourg Monaco* Netherlands Norway San Marino Spain Sweden Switzerland United Kingdom of Great Britain and Northern Ireland n = 19 (10.0% of total, 38.0% of region)
SOUTH-EAST ASIA REGION (N = 10; 5.3% of all Member States)			
Bangladesh Bhutan India Indonesia Maldives Myanmar Nepal Sri Lanka n = 8 (4.2% of total, 80.0% of region)	Democratic People's Republic of Korea* Thailand n = 2 (1.1% of total, 20.0% of region)		

Level of Economic Development			
Low (N = 56; 29.5%)	Lower-Middle (N = 69; 36.3%)	Upper-Middle (N = 33; 17.4%)	High (N = 32; 16.8%)
WESTERN PACIFIC REGION (N = 27; 14.2% of all Member States)			
Cambodia China Lao People's Democratic Republic Solomon Islands Tuvalu Viet Nam	Fiji Kiribati Malaysia Marshall Islands Micronesia, Federated States of Mongolia Niue Palau Papua New Guinea Philippines Tonga Vanuatu Western Samoa	Cook Islands Republic of Korea	Australia Brunei Japan Nauru* New Zealand Singapore
n = 6 (3.2% of total, 22.2% of region)	n = 13 (6.8% of total, 48.1% of region)	n = 2 (1.1% of total, 7.4% of region)	n = 6 (3.2% of total, 22.2% of row)

Appendix D – Qualitative codes and themes with examples

EXAMPLES	
THEME and Definition (Code Word)	
BENEFITS	
more benefits (ben-more)	health insurance scheme established, basic allowance provided to cover nursing-uniform expenses, maternity benefits increased for all government workers; there has only been an increase in the emergency bonus, and a proportional seniority bonus and bonus 14 (14th salary payment) have been established
less benefits (ben-less)	regarding planned increases in salary/benefits for nurses, the prospects for nurses are tentative at best; the need...here is issues on special allowances
more benefits, but with restrictions (ben-mwr)	payment for advanced education leave, tied to inflation; yes benefit increases especially for nurses working in remote areas
SALARIES	
more salaries (sal-more)	increase in compensation, salary increases recently especially for government employed nurses, cost of living adjustments, annual salary adjustments
less salaries (sal-less)	no increases are in sight, as some are predicting a freeze; in a number of provinces, nursing personnel incurred salary reductions over the same time period (since 1992)
more salaries, but with restrictions (sal-mwr)	tied to educational preparation or working in remote areas; yes salaries increased, and despite the lack of inflation, the cost of living has risen 20% in the last two years; salary scale increased with an increase in working hours from 35 hours a week to 48 hours; salary increase was effected in the form of a monthly incentive bonus equivalent to 40-50% of the base salaries of nursing personnel; yes salary increases especially for nurses working in remote areas
DEMAND	
more demand for positions (dpos-more)	Chief Nursing Office tried very hard to create senior positions at province level, but the result is failure; need to train family nurses (primary level nurses); definitely in need of strengthening the central position and creating a position at provincial level; nursing administration at central level intends to submit a proposal for additional senior posts; each year proposals are made by the regional level to the central authorities concerning the resource requirements for nursing but because of budgeting shortages, these are only partly satisfied
less demand for positions (dpos-less)	nursing shortage, need for local nurses; there is a plan to reduce the number of budgeted posts for professionals and increase the number of non-professional posts such as patient care assistant
more demand for services (dem-more)	increasing demand for nursing services, introduction of home resource aids, additional staff required to cope with high dependency/acuity clients (e.g. neonates)
less demand for services (dem-less)	preference for obstetrician over midwife; the current number of births is likely to decrease and so will the need for pregnancy and the 'maternity care services'

THEME and Definition (Code Word)	EXAMPLES
SUPPLY	
more supply of positions (spos-more)	opportunities in clinical streams especially in some hospitals, midwifery positions available, the government has plans to make positions available, hiring of non-local staff, recruitment of expatriates needed to fill vacancies
less supply of positions (spos-less)	there is a tendency to decrease "senior" nursing positions especially with the introduction of programme management decentralization; the health system...has been downsized resulting in decreased numbers of nurses; nurses and midwives are not yet working at regional level; budgeted health visitor posts have in some cases been transformed into posts for other professionals (medical doctors, social workers); the number of budgeted posts for nurses is decreased
more supply of services (sup-more)	too many nursing personnel employed in outpatient clinics and ambulatory services
less supply of services (sup-less)	shortage of midwives; financial constraints have been the cause of reduction in the recruitment of student nurses and decrease in continuing education programmes for nurses; in order to obtain required ratio of nursing personnel in PHC, we should extent number of nurses approximately 10%
SUPPLY/DEMAND GENERAL ISSUES	
supply and demand issues (supdem)	no increase in labour force, no difficulties with supply as government is largest employer, have sufficient midwives, assessment of personnel needs gathered yearly
DEPLOYMENT	
deployment (deploy)	manpower policy for deployment of staff unclear, about 7/10 nurses working in private hospitals or Ministry of Health, limited educational background hinders nurses' career mobility, assessment of deployment of personnel uncovered strengths and weaknesses, flexibility in deployment, lack of a nursing management system to assist in deployment of staff, nurses are only utilized in hospitals
utilization emphasis on low-level nursing staff (utilow)	nursing assistants for direct patient care; reassignment of low-complexity nursing duties to lower-educated support workers; community nurses spent a great deal of time doing non-nursing functions - introduction of Home Resource Aides; highest proportion of time devoted to direct care of the user is that of the nursing auxiliary; nurses and midwives divulge a large segment of their roles and functions to personnel who are not qualified

EXAMPLES	
THEME and Definition (Code Word)	
SHORTAGE	
short supply of positions (short-sup)	shortage of nurses in hospital care, especially in the big cities; inability to cover all areas and shifts satisfactorily
short demand for services (short-dem)	too many nurses employed in outpatient clinics and ambulatory services, shortage of specialized nurses
short supply of positions due to inappropriate scheduling (short-is)	leave-taking takes personnel out of workforce in significant numbers, early-retirement takes personnel out of workforce in significant numbers, inability to cover all areas and shifts satisfactorily
ROLES AND FUNCTIONS	
change in demand (cdemand)	shortening of length of stay at the hospital due to the expansion of the primary health care and home care with nurses in increasingly important functions
change in utilization of nurses and/or midwives (cutil)	higher acuity of patient illnesses = higher intensity nursing, increased workload, nurses are subject to long working hours; identification of activities carried on by nurses that lie outside their sphere of competence, dedication by the nurse of more of her time to administrative work, the highest proportion of time devoted to direct care of the user is that of the nursing auxiliary;
inappropriate utilization of staff (iutil)	nurses spend much time doing non-nursing activities, counseling and referral areas insufficiently utilized, need to replace nurses, most of whom are CLD, under use of skills; lack of professional nursing activities in nursing care planning and the nursing process, a high proportion of non-professional nursing activities, overlapping roles between nursing grades
restructuring done in nursing profession and/or in nursing roles (restructd)	restructured profession with university nurses at the top, nurses in district clinics have had functions examined and a new post has been introduced in hospitals, expanded role of nurses includes cardiac rehab, diabetes counseling, and community psychiatric nursing, restructuring led to establishment of new position with new salary level, new structures provide positions
restructuring needed in nursing profession and/or in nursing roles (restructn)	accountability of nurses unclear, need for more nurses involved in management; we planned to work on the Career Structure for Nurses this year (1995) especially for Clinical Specialist Nurses such as Midwives, Pediatric, Psychiatric, Operating theater etc. including those in the middle management posts; a committee is to be set up to streamline the career structure of all categories of health staff including nurses/midwives in 1995
changes in the mix of skills and/or level of responsibility required (jobdesign)	job enlargement and/or enrichment, in human-resource-management terminology, role clarity required between nurse manager and clinical coordinator in clinical areas, job descriptions of all nurses/midwives at all levels reviewed and updated, job specifications of nurses working at different specialties is being developed, job descriptions need updating; management role of nurses is emphasized at all hospital health centers, nursing roles defined clearly, psychosocial role of nurses is important, considering adding important life-saving skills to midwife function, midwifery to be added to nurse education, need for nurses to relieve the intensity of junior doctors' work, reclassification of job descriptions needed to increase salaries
status quo is maintained (statusquo)	goal is to avoid downsizing by maintaining status quo; the number of directorial posts for nurses have remained unchanged; in-country continuing education for managerial functions is provided on a periodical basis

THEME and Definition (Code Word)	EXAMPLES
FINANCIAL RESOURCES	
financial resources is an issue (fr)	research fellowships increased, health services research fund, plans exist to extend level of investment in nursing research, an increasing number of midwives are funded in order to study midwifery problems, planned, but financial obstacles exist, increase in student bursaries, budget review in progress, increase depends on economy
HEALTH POLICY	
infrastructure development other than research-specific (id)	consolidation of obstetrical institutions accomplished, in National Plan Strategy, development of a Chamber of Nursing is proposed, family involvement in caregiving is necessary, establishment of a research infrastructure
infrastructure supports exist (is)	the national health authorities are organized in a multi-professional manner; at the National Board of Health and Welfare there are two persons with a doctorate degree in nursing who have functions as experts in the area of nursing, during 1994 the Board also established a multi-professional nursing expert group headed by a nurse, in addition, there are nurses/midwives employed at the National Board of Health and Welfare with different functions in the area of health; there are a number of departments within the Ministry which deal with matters concerning training, utilization, attestation and the determination of the needs of nurses (midwives), a specific co-ordinating role in nursing and practical health care is carried out jointly by the administration of educational establishments and the Research Centre for Continuing Education
national action plan exists (nap)	the action plan for nursing has been made with the idea of bringing solutions to main problems concerning nursing; it consists of five main stages: (1) legislation (2) education (3) role definitions (4) situation analysis and manpower planning (5) standards of practice, (1) and (3) have already been completed; the National Plan of Action embraces all aspects of development in the field of nursing: education, post-graduate training, and the definition of the roles and functions of all categories of health workers; it also contains proposals for a law on the status of nurses; Human Resources for Health (HRH) Master Plan has incorporated the action plan for nursing/midwifery development in an integrated personnel concept for health service
nurses and midwives' contribution to health care policy (nmwregs)	establishment of nursing division; more emphasis on the role of nursing, now we are members in the Advisory Committee of MOH, nurses in hospitals and districts are involved more in policy development; establishing of the Chamber of Nursing, one nurse is member of parliament in the National Council; we have participated in the revision of the other bills of law being pushed by the Ministry, integration of nursing into the National Health Council and local health councils, and the National Committees on breast-feeding and maternal mortality, participation of nursing in decision-making at the local level, hospitals and health centres; senior nursing personnel are members of the Health Planning Committee which formulates Health Policy; nursing is given no place in the formulation of policies, which are decided without the participation of the nursing sector
availability of nursing positions at central level (npac)	the positions held by nurses responsible for some programmes (Epidemiology, School of Medicine, Information for health education) have not changed since 1992; the number has fallen - in 1992, there were 22 nurses on the shift, whereas today there are six, the others having been replaced by other professionals; although no specific nursing positions were established at the central level, nurses occupy positions at all levels; midwifery was regulated in January 1995, and it now has a midwifery programme coordinator; at the central level (in the counties) leading nurses are absent; plans are ahead to decrease the number of senior nursing positions from five to one; a Nursing Supervisor for Primary Health Care added to the staff in February 1995

EXAMPLES	
THEME and Definition (Code Word)	REGULATION AND LEGISLATION
regulatory/legislative/ policy issues (regs)	new regulatory system needed, equal opportunity concept introduced, policies and procedures for maternity care, update of nursing policy and procedure manuals, no policy on staff deployment, new standards for nursing specialties, occupational policy, it is proposed in national plan, government-promised salary increases contingent on fulfilment of existing policy, over the next 3 years, increases in salaries are expected based on rising educational requirements, awaiting legislative approval
	the intention is to disseminate the resolution as soon as it has been translated
MANAGEMENT OF NURSING AND MIDWIFERY SERVICES	
change in management training and education (ctredm)	it is the profession itself together with employers who are responsible to increase management leadership training; a territorial-wide 3-week nurse management course is delivered once a year and can take up to 25 participants; the nursing association provides 3 levels in nursing administration courses; nurses have been sent for further studies besides participation in the National Staff Development Programme
change in management training and education needed (ctredmn)	by promoting recognition of and strengthening nursing leadership skills at all levels of the health system; efforts are being made to establish a degree programme with an administration track
nursing positions available in management (nmpa)	new management positions available, more general management posts than pure nursing posts in private sector; more administrative positions for nursing; increase in the number of Nursing Officers and Senior Nursing Officers; nurses and midwives are managers at the regional and district level
performance/appraisal- related issues (perfapp)	nurses not evaluated for their professional competence, staff evaluation is required on a regular basis, increased continuing education attendance needs to be encouraged, midwives to be supervised by peers, job evaluations should result in increase of salaries and benefits, to upgrade more nurses in keeping with job evaluation process
measurements of productivity (productive)	time-motion studies, absenteeism
quality assurance (qa)	nurses still have to act in the interests of the institution, rather than consider quality of care, along with increased public awareness about health has come an increase in demand for <i>quality</i> services; thanks to advanced training the quality of nursing has improved
WORKING CONDITIONS	
occupational health and safety (ohs)	poor maintenance of health buildings; safer working situation for the personnel; security guards are assigned to do heavy lifting for the nurses
advancement through training and education (ate)	advanced training courses take place for improving nursing quality, development, management and financing; considering advancement to diploma of nursing education; proposal for two-year post-basic programme for nurses who graduate from the health college (2.5 years) for further two years to complete B.Sc. programme - programmes in process: (1) master's degree (2) four-month certificate programmes for the 3-year programme nurses who are in the service; we are in the process of making a HRH master plan where course opportunities are clearly reflected, also upgrading of nurses are being done frequently; recognition of intermediate level nursing studies by universities, academic degree of the first licentiates in nursing, strengthening and broadening of post-basic courses

THEME and Definition (Code Word)	EXAMPLES
promotional opportunities (prom)	no promotions in last 15 years, promotion to increase salaries, hierarchical system for promotion exists; efforts are being made to improve the career structure through motivation and incentives; through additional education many have been promoted upward, i.e. Nursing Supervisor, but only when senior posts with upward or lateral mobility are vacant; career path in clinical specialization for nurses in some hospitals are in place
quality of working conditions (qwl)	low staff morale - due to lack of staff development and high incidence of industrial accidents; safer working situation; for material reasons we are not currently in a position to ensure that adequate financial, material and technical resources are made available for nursing and midwifery or to create the appropriate working conditions in order to maintain the interest of staff and improve the quality of their services; poor working environment and shortage of basic equipment and supplies
union involvement (union)	Nurses Association is working on the new submission for Nurses, this include the review of the existing Nurses salary structure and domestic market allowances for specialist Nurses in the Clinical and Management Post; the National Federations of Nurses and Midwives may influence political choices because of their public role (non-profit making, public institutions); the national centre for nursing and care provides a national platform, more than sixty professional nurse interest groups and associations are involved, the centre coordinates and provides commentaries on policy documents and sends in proposals
RESEARCH DEVELOPMENT	
research publications (pubs)	publication on nurse decision-making, publication on nursing innovations, graduates' higher-education theses will lead to publication
nursing/midwifery problem area for research (nmwpa)	research topics underway include quality assurance, social aspects research, programme evaluation of a particular national health intervention, decision-making in clinical nurse practice, direct care research initiated, with a nurse as Director, disinfection techniques and their effectiveness, local recruitment issues, nursing infrastructure issues, research in nursing education, roles and functions of nurses, nursing innovations, nursing contributions to health care; preliminary research underway includes perinatal health care delivery, descriptive study of home-births and midwives' roles/functions, intervention studies aimed at health promotion during pregnancy, nurses' perceptions of carrying out procedures for patients, evaluation of nursing and midwifery curricula, baseline data for geriatric/gerontology service, burnout syndrome in nursing; social aspects research includes health and social inequalities clinical effectiveness, primary nursing for urban population, review of health services research is being planned for this year
group/position assembled to cooperate on research project(s) (rgp)	appointment of Professor of Clinical Nursing Research, plan to establish research group and provide it with investment planning authority (i.e. for funding of research projects), participation in international and regional research group, collaborative research: WHO system of obstetrics/breast feeding/midwifery research with UNICEF, research in conjunction with WHO, commencing creation of guidelines for research, research guidelines for nursing will be developed in 1995, 3-year project groups to be formed

EXAMPLES	
THEME and Definition (Code Word)	
EDUCATION	
change in training and education (ctred)	curriculum review done, courses have been organized, 'Health for All' incorporated in curricula; the approach of upgrading nursing and midwifery education necessitates improvement in this area, plans will be made in the near future; nursing and obstetrical courses have been organized, we introduced the system of nursing in university and post-graduate studies
change in training and education needed (ctredn)	unsuitable curriculum - change needed, lack of coordination in training among hospital staff, training not related to service need; much of the new legislation pertains to education and training requirements; the policy of health and well-being, adopted in 1992, rests on the principles of health for all, and its content will be integrated in the new collegiate education in nursing care
nursing education received in foreign countries (ford)	in order to acquire the status of workers, many recently obtained scholarship funding abroad; the Ministry of Health has planned to send 5 nurses to Japan to acquire a specialized education in management of human resources for a period of 10 months; a large number of nurses are on study leave in the U.S. completing BSc and Master's level programmes; we have no training institution for basic nursing, midwifery training and structured post graduate, we depend on regional nursing schools; all higher level education is done abroad
increase in training and education needs (itrendn)	need for changing skill mix, continuing/post-grad training/skills needed, training need for areas other than just cardiac and mental diseases, in-services training needed, low level of professional knowledge exists, task-oriented training needed, nurse practitioner training needed, specialized training/skills post-grad, need for change, need supervision of midwives in the field, selective educational needs - e.g. in specialties, increased effort to train nationals to replace expatriates, need for education of nurses and midwives, train auxiliaries (Nat'l) in Midwifery (Assistant Nurse), development of nursing health care promotion skills, need basic midwifery education for midwife school principals (pref. bacc. degree), medical knowledge update needed for nursing staff
nursing positions available in higher education (nepa)	career opportunities in education vacancies in higher education; since 1986 there are about 20 nursing and midwifery positions of the national institute for training of health care providers; leadership positions in Ministry of Health, hospitals/institutions, and PHC services have increased for nursing administration, education, and nursing quality assurances
access to university education (uaccess)	annual nursing survey results indicate increasing numbers of nurses with post-registration qualifications; nursing education moved to university level; number of nursing graduate schools and university programmes increased
conference on nursing/midwifery issues (conf)	annual perinatal meeting; every year the Nursing Association holds a scientific nursing workshop in which the 4 best research projects are presented which have been carried out by the students in the licentiate programme and the nurses in service; research conference held annually and supported by nurses in the Caribbean and other parts of the world
ASSESSMENT	
functional assessment completed or is ongoing (fassoc)	nurses' functions have been examined in the areas of nurses working with district therapists, pediatricians, and general practitioners, needs assessment for senior staff, the roles and responsibilities of the officers were reviewed to ensure maximum utilization
functional assessment is required (fasrr)	we intend to start the assessment of the role and function of the nursing personnel in certain health care areas such as primary health care, management, mental services, intensive care services; (a functional assessment) is essential in light of changing practices in the contemporary health contract; it has been our intention to make such an assessment but we are constrained due to lack of technical skills and financial resources

EXAMPLES	
THEME and Definition (Code Word)	
needs assessment completed or is ongoing (nassc)	situational analysis conducted, manpower planning conducted, national needs assessment conducted, continuously updating plan, standards for training identified, national needs assessment, patient classification system needed
needs assessment is required (nassr)	the Sixth National Sample Survey of Registered Nurses is being planned for 1996; in 1995 and 1996 it is planned to carry out a detailed analysis of the needs for general medical personnel, taking demography, sick rate and the lifestyle of the population into account
utilization assessment completed or is ongoing (uassc)	data base for midwives was collected previously and data still computerized in order to be analyzed for future correction of underutilization; assess utilization of BSc nursing graduates
utilization assessment required (uassr)	the last research (SAGO on request of National Federation of Nurses) was published in 1991, the Ministry of Health makes a yearly census of health personnel, beds and hospitals, but there is no evaluation of data; we need certain assessment but so far we have not made any plan

Other codes not falling into a theme:

- family: priority given to family issues (e.g. limited mobility due to husbands)
- ngr: not treated as the government's responsibility

Appendix E – Associate and Non-Member States’ Responses

List of Non-Member States by Region and Level of Economic Development

Level of Economic Development	Region		Total
	Americas	Western Pacific	
Lower-Middle		Tokelau* North Maria Islands Wallis and Futuna	3
Upper-Middle	Puerto Rico* Anguilla Aruba British Virgin Islands Martinique Montserrat	American Samoa Guam Macao New Caledonia	10
High	Bermuda Cayman Islands	French Polynesia Hong Kong	4
Unknown	Curacao Turks		2
Total	10	9	19

* Associate Member State

Frequency of Non-Member States' Responses to Each Question (% Yes)

Assessment of Needs	
Q 1.1 Since 1992, have you conducted as assessment of the needs for:	Nursing 57.9% (n=11) Midwifery 36.8% (n=7)
Q 1.3 If no, is it planned to make such as assessment within the next 3 years for:	Nursing 10.5% (n=2) Midwifery 5.3% (n=1)
Assessment of Utilization	
Q 1.4 Since 1992, have you conducted an assessment of the deployment and utilization of:	Nursing 52.6% (n=10) Midwifery 26.3% (n=5)
Q 1.6 If no, is it planned to make such an assessment with the next 3 years for:	Nursing 5.3% (n=1) Midwifery 0% (n=0)
Assessment of Roles and Functions	
Q 1.7 Since 1992, have you conducted an assessment of the roles and functions of nurses and midwives in relation to changing needs, and roles and functions of other health staff?	47.4% (n=9)
Q 1.9 If no, is it planned to make such an assessment within the next 3 years?	15.8% (n=3)
Strengthening Management and Leadership	
Q 2.1 Since 1992, has the number of senior nursing and/or midwifery positions at the central level (ministry level) been increased?	21.1% (n=4)
Q 2.2 If no, is it planned to increase the number within the next 3 years?	15.8% (n=3)
Q 2.3 Since 1992, has the number of senior nursing and/or midwifery positions at the operational (e.g. region, province, district) level been increased?	42.1% (n=8)
Q 2.4 If no, is it planned to increase the number of positions within the next 3 years?	5.3% (n=1)
Q 2.5 Since 1992, has there been an increase in the number of nurses/midwives receiving training to strengthen managerial and leadership capacity?	47.4% (n=9)
Q 2.6 If no, is it planned to increase management and leadership training within the next 3 years?	15.8% (n=3)
Enacting Legislation	
Q 3.1 Since 1992, have there been legislation and/or regulations enacted or reviewed, aiming at ensuring quality nursing and midwifery services and education?	Nursing 15.8% (n=3) Midwifery 15.8% (n=3)
Q 3.2 If no, is it planned to enact/review legislation/regulations within the next 3 years?	Nursing 31.6% (n=6) Midwifery 26.3% (n=5)

Strengthening Education	
Q 4.1 Since 1992, has there been a change in nursing and midwifery curricula to reflect strengthening of Primary Health Care (PHC) content for:	Nursing 31.6% (n=6) Midwifery 21.1% (n=4)
Q 4.2 Since 1992, has quality of nursing/midwifery education been reviewed/upgraded in:	Basic 52.6% (n=10) Continuing 42.1% (n=8) Post-graduate 31.6% (n=6)
Q 4.3 Since 1992, has there been a change in the financial resources available to support basic education, continuing education and post-graduate education for nursing and midwifery?	<i>Basic education</i> increased 26.3% (n=5) no change 10.5% (n=2) decreased 0% (n=0) info. NA 63.2% (n=12) <i>Continuing education</i> increased 10.5% (n=2) no change 10.5% (n=2) decreased 5.3% (n=1) info. NA 73.7% (n=14) <i>Post-graduate education</i> increased 0% (n=0) no change 15.8% (n=3) decreased 0% (n=0) info. NA 63.2% (n=12)
Q 4.4 Since 1992, has there been any change in the number of fellowships supporting basic education and post-graduate education for nurses and midwives?	<i>Basic education</i> increased 21.1% (n=4) no change 15.8% (n=3) decreased 15.8% (n=3) info. NA 47.4% (n=9) <i>Post-graduate education</i> increased 10.5% (n=2) no change 26.3% (n=5) decreased 0% (n=0) info. NA 63.2% (n=12)
Strengthening Education (continued)	
Q 4.5 Since 1992, do more nurses and midwives have access to university education?	31.6% (n=6)
Promoting Research	
Q 5.1 Since 1992, has there been any increase in health services research initiatives (in terms of financial resources allocated, nursing and midwifery problems addressed, reports published) on the contribution of nursing and midwifery to health care delivery?	10.5% (n=2)
Q 5.2 Is such research planned within the next 3 years?	5.3% (n=1)

Working Conditions	
Q 6.1 Since 1992, has there been any increase in salaries or benefits for nursing/midwifery personnel?	47.4% (n=9)
Q 6.2 Is such an increase planned within the next 3 years?	36.8% (n=7)
Q 6.3 Since 1992, has there been any improvement in career opportunities for nurses and midwives?	36.8% (n=7)
Q 6.4 Is such an improvement planned within the next 3 years?	26.3% (n=5)
Adequate Resources	
Q 7.1 Since 1992, has there been any change in the number of budgeted posts for nurses and midwives?	31.6% (n=6)
Q 7.2 Is such a change planned within the next 3 years?	31.6% (n=6)
Health Policies	
Q 8.1 Since 1992, has there been any change with respect to the contribution of senior level nurses and/or midwives to health policy development?	36.8% (n=7)
Q 8.2 Since 1992, has there been any major policy change to strengthen nursing/midwifery?	26.3% (n=5)
Q 8.3 Is there a written national action plan for nursing/midwifery development?	Nursing 5.3% (n=1) Midwifery 0% (n=0)
Does your Ministry of Health have:	
Q 9.1 A nursing unit?	21.1% (n=4)
Q 9.2 A midwifery unit?	10.5% (n=2)
Q 9.3 A nursing/midwifery unit?	15.8% (n=3)
Q 9.4 A chief nurse?	52.6% (n=10)
Q 9.5 A chief midwife?	10.5% (n=2)
If none of the above, does your Ministry of Health have:	
Q 9.6 A focal point for nursing?	0% (n=0)
Q 9.7 A focal point for midwifery?	0% (n=0)
Q 9.8 A focal point for nursing/midwifery?	0% (n=0)
Q 9.9 Other relevant organizational structure?	5.3% (n=1)

Was resolution WHA45.5 distributed to relevant officials/nurses/midwives:	
Q 10.1 At central (Ministry of Health) level?	15.8% (n=3)
Q 10.2 At regional level?	0% (n=0)
Q 10.3 At provincial level?	0% (n=0)
Q 10.4 At district level?	0% (n=0)
Q 10.5 Elsewhere?	0% (n=0)
Q 11 Was resolution WHA45.5 translated into your country's official language(s)?	10.5% (n=2)

In almost all countries of the world, nursing and midwifery services are the backbone of the health care system, yet they have not enjoyed the status or economic support to realize their full potential. In May 1992 the World Health Assembly adopted resolution WHA45.5 to strengthen nursing and midwifery, proposing eight key objectives.

The study reported here was designed to monitor progress in implementation of the resolution. A 37-item survey questionnaire was developed for the study, in eight sections, structured around the eight elements of the resolution and sent to Member States of WHO. One hundred and fifty Member States responded, providing for the first time basic information on the state of nursing and midwifery services throughout the world.

